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CALLE DEL HOSPITAL, FOENTERRIBIA, SPAIN.

From a drawing by MR. J. HATCHARD-SMITH, F.R.I.B.A.

MEETINGS

FRIDAY, *February* 1.

National Association of Auctioneers. Annual Dinner. At the Hotel Metropole, W.C.2. 7.15 p.m.

Institute of Registered Architects. First Annual General Meeting. At 43, Grosvenor-place, S.W.1. 6.30 p.m.

Institution of Structural Engineers (Western Counties Branch). Lt.-Col. S. Smith on "Jottings from the Notes of an Engineer at Home and Abroad." At the Merchant Venturers' Technical College, Bristol. 7.15 p.m.

Civil Engineering Society of the Royal Technical College. Mr. J. C. Banks on "Specifications." At the Royal Technical College, Glasgow. 7.45 p.m.

MONDAY, *February* 4.

Chartered Surveyors' Institution. Mr. Sydney A. Kelly on "The Administration of the Town and Country Planning Act, 1932." 6.30 p.m.

Electric Lamp Manufacturers' Association. Mr. W. J. Jones on "Technique of Lighting." At 2, Savoy-hill, W.C.2. 7.30 p.m. Visit to the New R.I.B.A. Premises, 8.45 p.m.

Society of Engineers. Presidential Address by Bt.-Col. H. C. Hawkins. At Burlington House, W.1. 6 p.m.

TUESDAY, *February* 5.

University of London Lectures. Miss E. Jeffries Davis on "The Bridges of London." 5.30 p.m.

Institution of Civil Engineers. Mr. W. Morley Anderson on "Civil Engineering Work in the New Dunston Power-Station"; Messrs. C. S. Berry and A. C. Dean on "The Constructional Works of the Battersea Power-Station; and Messrs. V. F. Bartlett and W. H. Cadwell on "The Coaling Jetty, Circulating-Water System and Cable-Tunnels at the Battersea Power-Station." 6 p.m.

Institution of Structural Engineers (South Wales and Monmouthshire Branch). Ordinary Meeting. At the Institute of Engineers, Cardiff. 7 p.m.

Illuminating Engineering Society. Twenty-sixth Anniversary Dinner. At the Trocadero Restaurant, W.1.

WEDNESDAY, *February* 6.

L.C.C. Central School of Arts and Crafts. Sir Banister Fletcher on "English Renaissance (1550-1900: Character of Elizabethan and Jacobean Architecture." 6 p.m.

Institution of Civil Engineers. Sir Henry Japp on "Modern Methods and Plant for Excavation." At Grand Hotel, Sheffield.

Liverpool Architectural Society. Honan Night.

THURSDAY, *February* 7.

The Building Centre. Mr. P. Gatward on "Divining for Water, Oil and Coal." 8 p.m.

Institution of Structural Engineers (South-Western Counties Branch). Mr. E. W. Howells on "Riveted Pipe Lines." At Torquay. 7.30 p.m.

West Yorkshire Society of Architects. Biennial Dinner. At the Great Northern Hotel, Leeds. 8 p.m.

THURSDAY AND FRIDAY, *February* 7 *and* 8.

Royal Metal Trades' Pension and Benevolent Society. A Play, "Anne 100%," by Nettleson Players, in aid of Society's Funds. At Guildhall School of Music, E.C.4. At 8 p.m. each night.

FLEET STREET, LUDGATE AND OLD ST. PAUL'S, 1664.

From a drawing by PROFESSOR A. E. RICHARDSON, F.S.A.

"THE SOUTH SIDE"

IT is well over twenty years since the question of the south side of the Thames in Central London became a matter of large-scale discussion, and so suggestively has the subject stimulated thought that it seems impossible to those who have followed it since early days with keen interest that it can have occupied so long a period of apparently fruitless argument.

To those who have had no immediate interest in the district other than as intelligent citizens, the broad lines of town-planning involved seem clear and incontrovertible, and many inclinations seem to point in a similar direction. As the largest of the railway termini, Waterloo Station has only indirect communication with an important centre like Trafalgar-square, these two vital foci of traffic appearing at opposite sides of a loop. The popularity of the footway to Hungerford Bridge shows that a short cut fulfils a demand. Hungerford Bridge itself is a lumbering piece of limited utilitarianism, for the passing of which no tears would be shed from the æsthetically-minded. The northern embankment shows how a great boulevard can open up central property as well as link up the various transverse routes, and the untidy assembly of warehouses and wharves along the south bank suggest a district running to waste in comparison with its *vis-a-vis*. The junction of the South-Western and South-Eastern sections of the Southern Railway at Waterloo suggests the point where the less important might stop.

We see at a stroke a river improvement of the greatest size and importance; the addition of a new embankment in the middle of a river stretch at present poorly served; the opening of new first-class building sites, and a limit set upon the invasion of steam trains into the heart of the capital. It would appear strange that there should be any arguments to balance such an attractive array of advantages.

The whole picture was very ably presented in a pair of perspective sketches of the south side of the Thames, from the pen of Mr. Raffles Davison, illustrating a scheme of development prepared by Mr. Barclay Niven and himself many years ago. These drawings showed two wide landscapes roughly bounded from side to side by the bridges at Blackfriars and Westminster. The one showed the bridges leaving the orderly lines of the Thames Embankment and discharging into a muddled assembly of warehouses, chimney shafts and the like which still line the river bank. The other showed the same bridges with an additional stone bridge taking the place of the railway bridge and spanning from one embankment to another, with a new range of fine buildings lining the south bank. Graphically this showed the vast possibilities of the project, and the artistry of the draughtsman which portrayed the illegitimate romance which hangs over the existing muddle in some lights and in some moods, did not detract from the object lesson. There were, indeed, few architects and few town-planners, if any, who did not accept some such solution as this; and arguments centred more upon the expedience of a high- or a low-level bridge than upon any suggestion that there should be no bridge at all.

Town-planning endeavours to overcome or reconcile private interests when these are at variance with the common good, but there are plenty of examples where the sum of private interests proves too dear for the public purse to stand. Perhaps the earliest historical example on record is the famous town plan of London which Wren prepared after the Great Fire, and which remains only as a document.

In this particular stroke of town-planning, the private interests which stand most firmly in the way are those of the railway company, and we have to resist an inclination to assume that those interests are either exaggerated or valueless. The advantages of disembarking scores of thousands of passengers daily into the main street of London are already enjoyed by the company. Such privileges can only be given up for one of two causes: the first being a discovery that the advantage is of less importance now than it was when first established, or that equally good or even better arrangements can be made elsewhere by other means; and the second is that the community is willing to buy out those privileges at such value as they can be shown to have.

There can be no question of impoverishing a railway company, even for the common good, or any question of saddling the community with a crushing burden of debt. To those of us who have only the ordinary passenger's conception of railway organisation, it may seem that there can be no more inherent difficulty in principle in disembarking passengers on the south side of the Thames from one railway system than from another. We may be excused from imagining that a joint terminus on the south side might ultimately make for more economical working. But we have not the necessary technical knowledge for putting these views forward with authority. Nor have we heard any considered statements from those best able to voice them.

Thus, there seems to be the greatest measure of good sense in the words of Sir Giles Scott in his inaugural address to the R.I.B.A., and which we may well quote as they were spoken:

"As this matter of Charing Cross Bridge seems to be reviving, I should like to plead for a thorough investigation of this railway question as a first preliminary; it seems, indeed, to be the key factor upon which the whole scheme depends, for until this question is settled, no plan can be prepared; but let it be investigated by independent parties, who should only be called upon to give evidence."

Here we have a direct lead as to how a constructive step can be taken in the course of restoring order out of chaos, and it is clearly one without which any detailed speculation would be fruitless. We are glad, indeed, that the suggestion was made upon an occasion the importance of which cannot be ignored, and by one whose position commands respect, and his personality even more than ordinary attention. The inauguration of an inquiry upon the lines suggested would be a response popular within the profession and among all good citizens, and would further lay stress upon the leading position which the architectural profession should by right enjoy. It is rare, indeed, that an R.I.B.A. Conference brings forth so many important statements upon affairs of general interest, and it was fitting that the Centenary celebrations should have provided the occasion.

In the meantime, our statesmen would do well to resist the inclination to delay further in dealing with a problem which has already occupied a generation. Waterloo Bridge has been a subject of equally intense argument, and for a period not far short of this. It will be long indeed before traffic flows freely again along the direct route between South London and Waterloo, to Kingsway and North London. There is so much to do after decisions have been made, that the latter become daily of greater urgency.

NOTES

The Address to Students.

THE address to students given at the R.I.B.A. on Monday evening by Mr. A. H. Moberly, Chairman of the Board of Architectural Education (a report of the meeting appears on page 220), was a tour de force of its kind. Within the space of a comparatively brief paper, Mr. Moberly compressed a wealth of sage counsel, including, *inter alia*, a philosophical discourse on life, some acute reflections on Traditionalism and Modernism, some practical evidence of the value of co-operation between the architect and his workmen, and a penetrating sidelight on the psychology of clients. Compact of sound reasoning and good advice, the address might be perused with profit not only by the newer entrants into the profession, but by many older practitioners of the increasingly difficult art of architecture.

Scholarship and the Modern Movement.

MR. MOBERLY made some pertinent remarks on the modern movement. "There seems to me," he said, "to be a grave risk that it may fail to disentangle itself from the mannerisms and tricks of many of its exponents, and that the revolution which it is bringing about, and which is necessarily destructive in its first phase, may sweep away not only the pediments and entablatures, the traceried windows and pinnacles of traditions which are outworn, but may also sweep away the refinement, the sensitiveness and the scholarship which are essential to the creation of great architecture. If this is to be the outcome the resulting buildings must necessarily discredit the whole movement, including the fine enthusiasm from which it has sprung. Its creative impulse will have been wasted; and it is hard to see what can follow but a lifeless reaction. It rests with your generation to see that the study of man's past architectural achievements shall be neither neglected nor abused. By abuse, I mean a study of the forms developed by past generations undertaken with the object of imitating them in the buildings of to-day. By neglect, I mean an unwillingness to evolve principles from the successes and failures of the past, and a fruitless attempt to begin civilisation over again. If the modern movement is able to use scholarship intelligently, and is able to distinguish clearly between the logical implications of new methods of construction and the idiosyncrasies of those who merely attempt novelty, there is a real hope of the development of a fine imaginative architecture of the twentieth century."

FOENTERRIBIA, SPAIN.

From a drawing by MR. J. HATCHARD-SMITH, F.R.I.B.A.

The L.C.C. Architect.

MANY of our readers will learn with regret that Mr. G. Topham Forrest, F.R.I.B.A., Superintending Architect of Metropolitan Buildings since 1919, will retire at the end of March on grounds of ill-health. Before his appointment as architect to the L.C.C., Mr. Topham Forrest held the appointment of County Architect of Essex and prior to that, County Education Architect for Northumberland, his earlier appointments being under the Leeds Corporation and the West Riding of Yorkshire. He has been responsible for the many large housing schemes carried out by the Council since the War and for the architectural treatment of the new Chelsea Bridge, while he collaborated with Sir Reginald Blomfield in the design and erection of Lambeth Bridge. By his retirement architecture loses a popular and well-known personality.

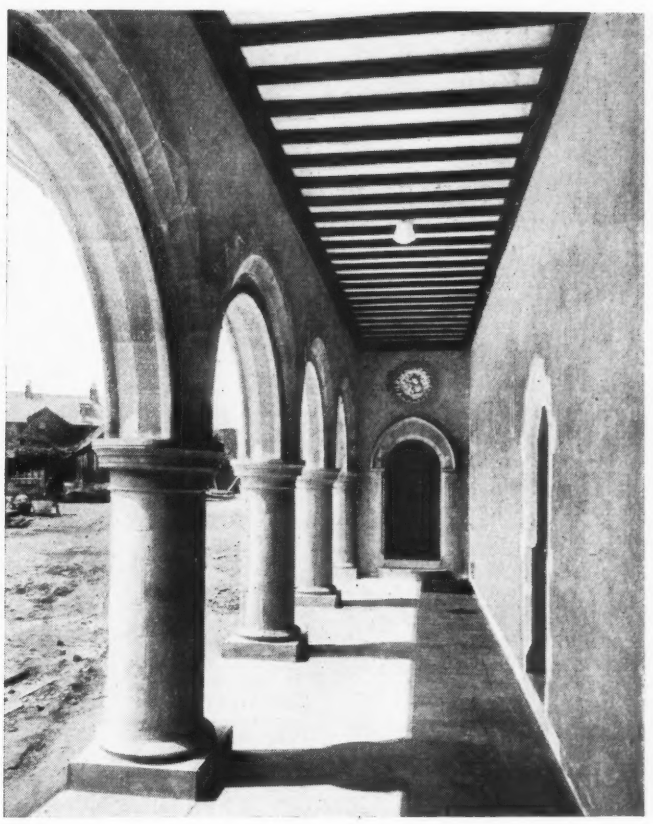
Existing Municipal Houses and Overcrowding

THERE is a danger that many Council houses may be condemned as overcrowded when the Government's new Housing Bill passes into law, for the majority of local authorities have been planning in accordance with the Ministry of Health's requirements as to size of rooms. Under the 1923 and 1924 Acts the advice of the Ministry was that in every Council cottage or flat with three bedrooms, the first bedroom should have a floor area of about 150 sq. ft., and would be suitable, therefore, for a couple and possibly a baby sleeping in the same room. The second room should be 100 sq. ft., where two boys or girls may sleep together, and the third not less than 65 sq. ft. Different measurements are, however, included in the Government's latest Bill. Two persons will not be permitted to sleep in a room unless it has a floor area of 110 sq. ft. or more. This means, in fact, that the second bedroom, now occupied usually by two in a family, will be overcrowded. Unless some amendment is made in these conditions, there is a fear that working-class accommodation in State-aided housing schemes will be reduced by about a quarter.

A Housing Weakness.

ANOTHER point, which emerges from the Census, 1931, Report on Housing, will interest those who favour a periodic inquiry into the size of families occupying municipal houses. The Report (Chapter 10) indicates that there is a class of families living in subsidised houses whose allotment of house room is much more generous than that which must have originally been contemplated. In 1931, there were at Becontree, Birmingham, Liverpool, and Manchester, respectively, 564 (2.8 per cent. of total families housed), 3,534 (12.7 per cent.), 1,495 (8.5 per cent.), and

1,205 (16.4 per cent.) families each occupying premises in which each person was enjoying two or more rooms. This analysis tends to prove the need (often expressed in these columns) for a periodic examination by local authorities of the numbers of persons housed in subsidised dwellings so that small families occupying space in excess of the recognised density allowance shall be removed to an alternative smaller dwelling. By this means, on the standard suggested by the new Overcrowding Bill, an extra 20,000 persons could be housed in the 6,798 dwellings represented by the four towns mentioned above. This condition is, we imagine, not confined to these schemes, and, we suggest, such a survey might fruitfully be undertaken annually with a view to rectifying the situation. The Report, which is summarised on page 234, is the first to be devoted to the subject of housing. A special reason prevented its earlier appearance, but we may hope for more prompt publication in future.



ST. WILFRID'S CHURCH, HARROGATE : The Cloister.
Mr. LESLIE MOORE, F.R.I.B.A., Architect. (See page 235.)

Windows in Witney.

Most people are agreed that some sort of beneficent control over architectural design is at present desirable. At its best, the systems of architectural panels under the Town and Country Planning Act can do much good. Details now reach us of an appeal heard at Witney before an inspector from the Ministry of Health against a decision of the Urban Council to insist on the use of small panes of glass or leaded glazing, as opposed to large panes, in a house proposed to be built on the Oxford-road, to plans by Mr. Gilbert T. Gardner, F.R.I.B.A. It may be thought that to hold a full-dress inquiry into a matter such as this is to alienate public sympathy from town planning. It was stated at the inquiry that there was a considerable body of local support for large panes of glass but, without having seen either the site or the proposed design for the house, or heard the whole of the evidence that was given, it appears to be undesirable to introduce into an area containing so much beautiful work of a traditional character any disturbing note.

Cardiff Civic Society.

This Society, established in October, 1933, "to make Cardiff more beautiful," which enjoys the Presidency of the Marquis of Bute, K.T., has just published its first annual report, which contains a brief account of the useful work already undertaken, and other information. We are glad to read that the citizens of Cardiff are getting to know of the existence and activities of the Society, and that although the present membership is not more than 100, there are many who approve of the aims of the Society. These should join its ranks and promote its interests. Many matters of importance to the development of the City have been considered by the Executive Committee. We are glad to note that "when action has been taken careful attention has been given to the appropriate form of such action. The Society wishes to be helpful and constructive. The Executive realises that suggestions privately made are usually more potent than criticisms publicly proclaimed. In some cases representations have been made by letter and in other cases deputations have been sent. Sometimes a member of the Executive has undertaken to approach the building owner or other authority. Often the negotiations have necessarily been of a confidential nature." These, we believe, are the right methods for such societies to adopt, by means of which much good work can be accomplished. Some of the problems which have engaged attention during the year are: the naming of streets; litter and damages to trees; an Information Bureau; City Hall extensions; new Government Buildings in Cathays Park; the entrance to the Ely Cemetery and the general question of the orderly arrangements of cemeteries. Particular attention has been paid to the desirability of placing explanatory notices of uniform design on buildings which have historical associations. As a result of efforts in co-operation with Sir Robert Webber, considerable publicity has been given to the problem of equipping Cardiff with a thoroughly efficient airport. Two surveys of Cardiff and district have been undertaken under the auspices of the Society. Dr. Cyril Fox made the valuable suggestion that they should schedule buildings worthy of preservation. They are being marked on a large-scale map and plans and elevations are being prepared. The second survey is devoted to open spaces, parks and other recreational facilities.

A London Brick Architecture Medal.

The first award of the gold medal to be presented annually by the Tylers' and Bricklayers' Company to the architect of the building judged to have the most merit within the R.I.B.A. radius of eight miles from Charing Cross, will be announced in June next. The building is to be one of brick and tile (buildings, having a small amount of stone or other dressings will not necessarily be precluded) and must have been completed within the three years ending December 31, 1934. Any practising architect is, we learn, at liberty to nominate any buildings, including his own, for the consideration of the jury. No special form is necessary and the following information should be given: Name, situation and architect of building, signed by the nominator. Nominations must be sent to the Clerk of the Tylers' and Bricklayers' Company, 6, Bedford-row, W.C.1, not later than March 15. The Company will have the assistance of the R.I.B.A. in judging the award.

GENERAL NEWS

Brook Green.

The appropriate committee of the Corporation is to recommend Hammersmith Borough Council to abandon the proposal to build new municipal buildings on part of Brook Green. Strong representations had been made against the proposal by the London Society and a committee of local residents.

The Reinforced Concrete Association.

A meeting of the Reinforced Concrete Association will be held at 6 p.m. on Tuesday evening, February 19, in the meeting room of the R.I.B.A., to hear and discuss a paper by Mr. C. W. Glover, A.M.I.C.E., on "The Sound Insulation of Reinforced Concrete Buildings." A card of admission will be sent to any architect who may be interested on application to the Secretary of the Reinforced Concrete Association at 91, Petty France, S.W.1.

Rejection of House Plans.

The Minister of Health has vetoed the plans for houses at Dringhouses, York, prepared by Messrs. Pearson and Blackwell (Doncaster), Ltd., builders, into which an inquiry was held on December 10 last by an inspector from the Ministry, the builders having appealed against the decision of the York Corporation not to pass the plans. Their decision was directed against the flat roofs shown in the designs for the houses. The inquiry was reported in our issue for January 4 last.

Appointments Vacant.

Acton Corporation invite applications for the post of temporary building inspector, at a salary of £260. Applications by February 11, to Mr. W. G. Cross, M.Inst.C.E., borough engineer, municipal offices.

Southampton C.B. invite applications for the post of clerk of works in connection with the new grammar school for girls at Hill-lane. Salary £6. Applications, by February 9, to Mr. F. L. Freeman, secretary, Education Committee, Education Office, Civic Centre, Southampton.

Lead and Zinc Supplies and Prices.

With reference to the correspondence published by the Board of Trade on December 28 last, on the question of supplies and prices of lead and zinc, and the provisions of the Ottawa Agreements in regard thereto, the Import Duties Advisory Committee announce that since the receipt of the letter from the President of the Board of Trade they have had the matter under consideration, and they are now prepared to receive evidence, which should be forwarded in writing to the Secretary, Import Duties Advisory Committee, Caxton House (West Block), Tothill-street, Westminster, London, S.W.1, not later than February 6.

Import Duties on Iron and Steel.

The Import Duties Advisory Committee give notice that they have under consideration applications for an increase in the import duties on: Iron and steel (including alloy steel) of the following descriptions: Blooms, billets, slabs and sheet and tinplate bars (other than of wrought iron produced by puddling with charcoal from pig-iron smelted wholly with charcoal). Iron and steel rails weighing less than 36 lb. per yard. These applications are being considered in conjunction with the applications advertised on May 30, 1934, and June 13, 1934, for increased duties on iron and steel bars, etc., and girders, etc. Any representations which interested parties may desire to make in regard to the further applications now advertised should be addressed in writing to the Secretary, Import Duties Advisory Committee, Caxton House (West Block), Tothill-street, Westminster, London, S.W.1, not later than February 7.

Cruises for Architects, 1935.

The Association of Architects, Surveyors and Technical Assistants has entered into arrangements with the P. and O. Steam Navigation Company for members of the Association and friends to join two of the company's cruises during 1935, instead of organising independent tours on the Continent. Both cruises are by the s.s. "Strathnaver," 22,500 tons gross, one of the most modern vessels afloat, and the parties will be in the tourist, *i.e.*, second class. The first cruise starts on July 19 from Avonmouth, and visits Bergen, Stockholm, Zoppot (for Danzig), Copenhagen and Hamburg, and returns to Southampton on August 2. Fare £12 or £15. The second leaves Southampton on August 31, and visits Palma, in Mallorca, Naples (for Pompeii), Venice, Fiume, Split (Spalato), Milna, Dubrovnik (Ragusa), Corfu, Messina, Cadiz, Vigo and Arosa Bay, and returns to London on September 23, actually a three week's holiday. Fare £21 or £24. Particulars from the Secretary, A.A.S.T.A., 26, Buckingham-gate, London, S.W.1.

St. Peter-at-Arches, Lincoln.

One of the most ingenious architectural achievements carried out in recent years in Lincolnshire was the transfer of the Church of St. Peter-at-Arches from its position close to the Stonebow to the district of St. Giles on the top of the hill. The old church of St. Peter-at-Arches was a Georgian building, and it has been possible to reproduce most of the salient features. In the re-erected church, the north and south galleries have not been replaced, and another bay has been added, thus increasing the length. The plans were entrusted to Mr. W. G. Watkins, F.R.I.B.A., and every effort was made to preserve the most beautiful and distinctive features of the church. The work of transferring the church was done by the firm of W. Wright & Son, of Lincoln. Unfortunately, we learn that the funds available became exhausted with the completion of the exterior, and work has been suspended.

"Green Belt" Around London.

Mr. Herbert Morrison announced at a conference held in London on January 22 that the Council would be recommended to consider applications from certain other county councils for contributions towards the reservation of a green belt around London. The offer would be open, he said, for a period of three years, and the Council's commitment in that period would be limited to £2,000,000. The conference was convened by the L.C.C. to consider the reservation of recreational areas and the establishment of a green belt or girdle of open spaces round London. It was stated that a survey made in 1930 revealed that some 5,500 acres of land suitable for playing fields within a radius of 11 miles of Charing Cross had been built on during the preceding few years, and that there were then available some 26,500 acres. A further survey made by the Greater London Regional Planning Committee three years later showed that this total had by then been reduced by a further 3,000 acres. The land available for a green belt around London within a suitable distance is being rapidly encroached upon.

The Godwin and Wimperis Bursary.

Mr. W. Dougill, M.A., F.R.I.B.A., to whom, as we have already announced, the award of the R.I.B.A. Godwin and Wimperis Bursary, silver medal and prize of £200, has been made this year, is an old student of the Liverpool School of Architecture. His student career was one of outstanding performance. During his course, he obtained the distinction of being a Leverhulme Prizeman and a Holt Travelling Scholar in Architecture. He was twice selected as a finalist in the competition for the Rome Scholarship in Architecture, on the second occasion being awarded a special premium of £100 under the terms of which he spent twelve months at the British School at Rome. The results of his research whilst he was in Rome won for him the R.I.B.A. Silver Medal and Prize for Measured Drawings. He has now for some years been a member of the staff of the School, and is in charge of the Fourth-Year Studio. He is also Research Fellow and Lecturer in Civic Design and editor of the Town Planning Review, published by the School's Department of Civic Design.

COMPETITION NEWS

Civic Centre, Birmingham.

Following a meeting of the General Purposes Committee of the Birmingham City Council on January 21, it was announced that approval had been given to the conditions governing a competition for designs for a building to form part of the Civic Centre. The building, estimated to cost £200,000, will consist of an administrative block, on a site adjoining the Hall of Memory, to provide accommodation for the public works and town-planning, water and other departments of the Corporation. The competition, which is to be advertised shortly, will be limited to British-born architects practising in Britain. The design will be for a complete block, little more than one half of which will be erected as a first instalment of the Civic Centre scheme.

It will be remembered that the Corporation held a competition in 1926, won by M. Maximilian Romanoff, of Paris. The scheme was not carried out, principally on the score of expense.

Monument in Cornish Granite.

The Cornish Quarry Masters' Association invite architects, architects' assistants and architectural students to submit designs in competition for a monument in grey Cornish granite. The Hon. Humphrey Pakington, Mr. C. Lovett Gill, Mr. C. H. Holden and Mr. Howard Robertson, FF.R.I.B.A., S.A.D.G., have been appointed assessors, together with Mr. M. L. Wetherall, who will represent the Cornish Quarry Masters' Association. A prize of £50 will be awarded. Drawings must be in by April 8, and the result of the competition will be announced, and a criticism will be given, on Tuesday, April 16, at the Architectural Association. Details from the Secretary, A.A., 34-36, Bedford-square, W.C.1.

Methodist Church, Leeds.

Plans submitted by Messrs. Arthur Brocklehurst and Co., F.R.I.B.A., Martins' Bank-buildings, 10, Norfolk-street, Manchester, in a limited competition have been accepted for the erection of a Methodist church and Sunday schools on the Gipton Housing Estate by the Lady Lane Memorial Trustees of Leeds. The estimated cost is £12,000.

Central Offices, Hertford.

The Hertfordshire County Council are to hold a competition open to architects of British nationality for new central offices for the County Council at Leahoe, Hertford. Premiums of £350, £250 and £150 will be offered. Mr. Robert Atkinson, F.R.I.B.A., is the assessor.

CORRESPONDENCE

"The King's House."

SIR,—This house is to be "representative in every detail of the best that British architecture . . . can produce." Sir Giles Gilbert Scott, President of the R.I.B.A., nominated the architects to submit designs, and made the selection. The selected design includes a feature which is thus described by the architect: "From the entrance hall there will be a step down into the other rooms to give greater height."

I am much puzzled, because a step down seems to be a thing to be avoided at all reasonable cost, and over and above all others a step at the entry and exit to and from a room. Can you, or any of your readers, justify what seems to me, a layman, to be a fault? ALBERT P. GREEN.

Factory Buildings, Beeston, Notts.

The contract for the erection of additional factory premises at Beeston, Notts, for Boots' Pure Drug Co., Ltd., Nottingham, has been placed with Messrs. Peter Lind and Co., Ltd., 3, Central-buildings, Westminster, S.W.1. The cost will be approximately £135,000. The plans have been prepared by Sir E. O. Williams, 5, St. George's-road, S.W.1.

THE TRUTH ABOUT THE FLAT ROOF

By M.A.

II.—COMPARATIVE EFFICIENCY.

THE preceding article dealt with the subject of the flat roof from a more or less philosophical angle, treating the form mainly as a symbol and attempting to show that it was the symbol of little worth commemorating. The reply to such an argument cannot be conclusive, because it can only be based on the personal feeling which, I must admit, may be as sincere on the contrary side as my own. To continue the argument, therefore, we must lay this aspect definitely aside and explore those other considerations which may support or prejudice opinions on either side. The first of these considerations we will take as the relative efficiencies of the new and old forms, describing as the new form the flat roof which the most revolutionary school of thought has determined to be the roof of the future.

Efficiency is the prime factor in design, for, whereas we cannot go so far as to say that everything which is efficient is well designed, we can definitely say that nothing which is inefficient from a building point of view is well designed. Nearly all the most striking features which please the eye in architecture have arisen from long-accustomed usage of a time-tested building method. We have only to consider how much at home the 50 deg. roof pitch looks in the northern climate, and how out of place it would look in the South of France, to realise how much architectural beauty depends upon building construction. Let us consider, therefore, the flat roof as a suitable form for the English countryside and as applied only to the small domestic house.

Assuming that we have a free choice in the market between the sloping roof and the flat roof, there are occasions when we should choose the latter. We have, in fact, already chosen the latter for many generations when circumstances have turned the balance in that direction. The projecting verandah offers an opportunity for a balcony on the floor above, where a view worth catching is available from such a point of vantage, and promotes the feeling that it would be pleasing to sit and rest on such an elevation. Verandahs have been roofed flat even in the reign of Queen Victoria, as also have single-story wings where they can be conveniently used as balconies in many cases. The flat roof of larger area has not been usual in history, largely because the materials with which to cover it have been expensive and subject to severe limitations.

Now that we have at our disposal flat roofing materials at a lower cost and free from the traditional limitations, an influence in favour of the flat roof is quite natural, and if this can be formed to provide an equally sound roof covering in an equally direct manner and without any considerations worth mentioning on the other side of the balance-sheet, then there would be much to be said for taking the flat-roof form as the sensible shape for a modern house. I am convinced, however, and I hope to show, that there are many influences which turn the scale against this form. I will go even further and say that in spite of these limitations there are occasions when the convenience of a flat roof makes it worth while spending money to overcome the limitations which I claim to see. Chief of such occasions would be where the elevation of a flat roof gives a more perfect or unshaded glimpse of a view, and where the very thought of the top of a house as a promenade conjures up delightful pleasures to enjoy. The more we think about it, however, the more we shall see that such occasions are extremely rare. On a site which has already the enjoyment of fine views, such views can generally be enjoyed in far greater comfort from the ground and are in any case dependent upon a secluded position on an open site. It is quite foreign to the English character to enjoy relaxation and repose in anything but seclusion, and where we see a row of houses standing shoulder to shoulder in a row we may take it for granted that the flat roofs will not be used as promenades or resting places. In such cases those roofs are no more than a roof covering, and must be weighed in the balance with the sloping roof that can be applied to the case.

We turn, therefore, to the limitations I have already referred to. The space between the outer and inner coverings of a flat roof is so small that special precautions must be taken to guard against heat loss or heat transference from inside to outside the house. In other words, the flat roof must be insulated by some means. There are two ways of achieving this. The first is by insulating the ceiling and allowing the top cover to take care of itself. I believe this to be a thoroughly unsound idea, particularly in a timber-constructed flat. One of the chief items to observe in covering a timber flat with a seamless protective cover is that shrinkage and swelling of the timber work should be reduced to a minimum. Where the top surface is uninsulated and can thus transfer extremes of temperature upon the timber work the risk of cracking in the waterproof covering is very great, and I propose to exclude from our consideration, as impracticable, any flat roof which is not insulated, and any flat roof which is insulated only on the under side.

Once we have decided to insulate the roof on the upper surface, we are committed to an expense of some severity. There are excellent systems on the market at the present time consisting of slabs of insulating material which serve the treble purpose of guarding against heat loss, protecting the waterproofing material and providing a comfortable and decent-looking paving material. The most efficient to these systems, however, cost about double an ordinary flat-roofing material. It is worth paying for if it is going to provide an amenity. It becomes a subject for scrutiny if no such amenity is desired.

Another aspect of the question is found in the runs and positions of pipes and services in the upper floors of a house. Modern social habits demand increasingly the installation of separate wash basins in most or all of the bedrooms of a house, and long, horizontal pipes are inevitable. Electric wiring is chiefly desired out of sight. These things cannot be provided for within joist space which is to be permanently hidden on both sides. Generally, electric wiring is hidden in this space, with all its junction boxes, and by good luck trouble does not follow. But difficulties may arise, or alterations to the runs may be desired, and where junction boxes are not accessible for the drawing in of fresh wires, the ceilings of the house must be torn to bits. Pipes may be shown or cased in. In the first place, insanitary dust-collecting corners, quite foreign to modern ideas of efficiency, are created. In the alternative case the casings must be paid for, and if they are to be anything but an offence to the eye, their formation is not a cheap matter. Every house at present has its feed tank and probably its storage tank. With the flat roof, a little house must be built upon it to house these fitments, and if it is to look anything but a wretched little shed perched in the air, it must be well built and appear as part of the house.

If the roof is to be promenaded, the chimneys must be carried up well above head height. If not required for this purpose, the drawing of the chimneys is still problematical unless carried well above the roof, and even then unassisted by the upward converging currents which are created by a sloping roof. In any case, easy access to the roof is desirable, particularly where a promenade is to be formed, but also to provide easy access to the plumber who may be called in to correct defects. The construction and weather-proofing precautions necessary to form such access mean an expense of some considerable amount.

Excluding the desire for a promenade, every-one of these points is fully satisfied in the case of a house covered with a sloping roof. Let us add that the repair of a small defect in a tiled roof is a very minor matter, within the compass of any jobbing builder's capabilities. A repair of the slightest defect upon a flat roof is a specialist's matter requiring a rail journey and the transport of plant. I have no doubt whatever that the man who has made up his mind to roof his house flat for no other reason than to give it an unusual form is creating unnecessary difficulties which circumstances not only do not justify, but definitely contradict.

(To be continued.)

THE HOUSING BILL, 1935

L.C.C. RECOMMENDATIONS.

IN connection with the Housing Bill, 1935, the Housing and Public Health Committee and the Finance Committee of the London County Council make the following recommendations :—(i) The definition of " suitable alternative accommodation " in clause 11 is unsatisfactory so far as London is concerned;

(ii) The conditions specified in clause 12 (1) which it is proposed shall obtain to enable an area to be dealt with as a redevelopment area are too stringent so far as London is concerned, and as few qualifications as possible should be imposed for defining such areas in order that the reconstruction of large, old, congested and badly arranged areas in the County of London may be undertaken;

(iii) The functions of the proposed Central Housing Advisory Committee should not be such as to interfere with or overlap the work and duties of local authorities or cause delay in the carrying out of their operations; and the Council and the Metropolitan Boroughs Standing Joint Committee should be represented on the Advisory Committee;

(iv) The proposal to empower local authorities to establish Housing Management Commissions is open to grave objection;

(v) The proposals for amendment of the Housing Act, 1930, involving alterations in the basis of compensation for property required in connection with slum clearance operations are open to serious objection on the grounds of increased cost and the delay which would ensue in carrying out such operations;

(vi) The proposal in clause 60 (1) to enable an owner to retain land in a clearance area in respect of which the local authority has made a compulsory purchase order would result in complications and delay in the operations of local authorities;

(vii) The proposed Exchequer subsidy in respect of the provision of cottages, and of flats on sites costing (as developed) £1,500 an acre or less, is insufficient and should be increased;

(viii) The proposed reduction of the limits of the value of houses in respect of which advances may be made under section 92 of the Housing Act, 1925, and under the Small Dwellings Acquisition Acts, 1899 to 1923, is undesirable

That the foregoing resolution be communicated to the Minister of Health.

Architectural Talks to Junior Architects.

A series of talks by architects and others to junior members will be given at the Architectural Association during the next three months. It is intended that the talks shall be for assistants and young architects just started in practice, and only those under 30 years of age will be admitted to the meetings. The number admitted to each talk and discussion will be strictly limited to 25. The talks will commence at 8 o'clock. Admission will be by ticket only, obtainable from the Secretary at 34-36, Bedford-square, W.C.1. The opening lecture was on January 31, by Mr. J. R. Leathart, and the following are future dates and speakers: February 14, Mr. C. J. Medley (solicitor to the A.A.); February 28, Mr. G. Grey Wornum, F.R.I.B.A.; March 14, Mr. A. P. Costain (contractor); March 28, Mr. T. S. Tait, F.R.I.B.A.; April 11, Mr. B. Greig (district surveyor); and April 25, Mr. H. T. Barnard, A.R.I.B.A.

ADDRESS TO STUDENTS.

THE Address to Students was given by Mr. A. H. Moberly, M.A., Chairman of the Board of Architectural Education, at a meeting of the R.I.B.A., held at 66, Portland-place, W., on Monday evening. The chair was occupied by the President, Sir Giles Gilbert Scott, R.A.

After some introductory remarks, Mr. Moberly urged students to keep their minds open to ideas. "If," he said, "your blood boils when you hear the word 'modernism' or 'traditionalism,' you are not in the right frame of mind to decide what the architecture of the twentieth century ought to be. Relax your muscles and let your blood cool a little if it is your wish to make sound judgments rather than to persecute the heterodox." "Be suspicious," he continued, "of what used to be described as *le dernier cri*. It will not be novel in ten years' time. And unless it possesses more enduring qualities than novelty, it will soon pall. Architecture is a more enduring art than dressmaking. And follies of a kind which may be amusing in a fashion parade or on an exhibition stand are not suitable for preservation in brick and stone. You will soon tire of such things yourself, and the generation which follows you will be no more merciful towards your generation's follies than you are towards the follies of the generation which you succeed."

Development of Talent.

He would like to add a word on self-criticism. "You have a certain talent which you will develop to the utmost of your ability. Use the talent you have, and do not pine for the one which you have not. The Tenth Commandment ends with the injunction, 'Thou shalt not covet anything that is thy neighbour's.' I believe that it is far less often broken by those who covet their neighbour's goods than by those who covet their neighbour's ability. Produce the best work of which you are capable; but do not make yourself miserable by continually comparing it with the work of those whom you recognise to be better architects than yourself. Would you be more contented if you had their skill? You would still be crying for the moon. At what level of achievement could you say, 'My work satisfies me'? Discontent may be divine so long as it spurs us on, but it becomes morbid at the point where it begins to sap our energy."

He believed that designing was for many people so full of moments of exultation followed by moments of despair. And he believed that many suffered unnecessarily from a too vivid consciousness of their own shortcomings, where a simple acceptance of their imperfection would lead to a saner and more reasonable outlook. Fortunately, an excess of diffidence was not universal among artists; and there were still some happily absorbed in their work, without any self-conscious doubts as to its worth-whileness.

"Not long ago," he continued, "I met a man who has spent a considerable part of his life in Persia, and has collected Persian works of art. He has in his collection a number of wall mirrors with richly inlaid frames. The backs of these mirrors, though entirely concealed from view, are as richly decorated as the visible frames. He told me that he had asked a Persian artist why they decorated the backs of their mirrors. The Persian answered quite simply, 'You see, there is so very little room on the front.'"

That desire to adorn was a fundamental impulse in human nature, though Western civilisation had always tended to value simple lines and plain surfaces more highly than had the civilisation of the East.

Restriction of Ornament.

They were starting their careers at a time of unprecedented restriction in the use of ornament. The Puritanism of the present time was a healthy reaction against an ornamentation which was generally unspontaneous and lifeless. It rested with them to resist any swing back before a new tradition of ornament had had time for natural growth. Such a swing back could only lead to a recrudescence of revivalisms, which would destroy all hope for the new architecture which was struggling to find expression. But the danger was a very real one. Fashion had such powerful allies in the modern world; and fashion was as restless as it was irresponsible.

There seemed to him to be a grave risk that the modern movement might fail to disentangle itself from the mannerisms and tricks of many of its exponents, and that the revolution which it was bringing about, and which was necessarily destructive in its first phase, might sweep away not only the pediments and entablatures, the traceried windows and pinnacles of traditions outworn, but might also sweep away the refinement, the sensitiveness and the scholarship essential to the creation of great architecture. If that was to be the outcome, the resulting buildings must necessarily discredit the whole movement, including the fine enthusiasm from which it had sprung. Its creative impulse would have been wasted; and it was hard to see what could follow but a lifeless reaction. It rested with their generation to see that the study of man's past architectural achievements should be neither neglected nor abused.

The Tradesman as Expert.

Giving some general advice in relation to the carrying out of work, the speaker said: "You know what you are aiming at, and, if you can make the foreman understand what you want, you will often find that he knows better than you how to achieve it. Obviously, you can never know as much about bricklaying as a bricklayer, or about plastering as a plasterer, and if the tradesman is treated as an expert, he will give better service than if he is treated as a mere machine for carrying out instructions. Incidentally, there is a risk that your instructions may be bad instructions; and he may know them to be bad. Architects' specifications are necessarily very crude documents compared with the complexities of the processes to which they refer. I discovered this first from a country plasterer, who pointed out to me that I had specified that the sand was 'to be clean sharp river or pit sand, free from all impurities.' He added that he would never be able to work it if he didn't add some road sweepings. Not having any idea what road sweepings were, nor whether their use was an advantage or a disadvantage, I determined to find out a little more about plastering before my next job. But I must confess that my efforts to penetrate the mysteries of the plasterer's craft have never been very successful."

"When you accept a commission to design a building you will rightly regard it as an opportunity to express yourself architecturally. But do not forget that this must come second. The first consideration must be that your client is paying you a fee to provide him with what he wants, and that he is entrusting to you the responsibility of spending a large amount of his money. He trusts you to provide him with a sound, watertight building to meet his needs. That is not by any means an easy thing to do. And, generally speaking, it can only be safely done by adopting well-tried materials and methods of construction. If you wish to experiment with new and more or less untried materials, remember that it is with his money that you are experimenting, and that he must be a party to the experiment.

"You may be able to convince him that the experiment is worth while. He may, indeed, be more eager than you are to use some material or device which has been recommended to him by an undiscriminating friend. But, whatever the circumstances, remember that you are his technical adviser, and that it is your responsibility to make clear to him exactly what risks he is running, and what in your opinion are the prospects of success. You will be wise to record these cautionary remarks promptly in a letter, as it is more than can be expected of human nature that he should be perfectly just and reasonable if the first written evidence of your doubts arrive when his roof is leaking or his floor crumbling.

Dealing with the Client.

"When dealing with a client who has definite ideas about design—ideas, possibly, with which you may violently disagree—a little of the wisdom of the serpent is essential. Nothing will harden him in his views more effectively that opposition. Give him time to forget what he has said before you express your own views on the point. I often recall the description which an architect gave me nearly thirty years ago of his difficulties with the owner of a Tudor house which was to be reconditioned. The house had stone mullioned windows and beautiful old lead glazing, which the owner wanted to replace with plate-glass. When the architect was told of this he made no comment. But three or four weeks later, when discussing the house, he remarked on the beauty of the leaded lights, saying that they were some of the best that he had seen, and then immediately changed the subject of conversation. Another month passed, and then one day the owner told him that the greatest care must be taken in the preservation of the leaded lights, which were regarded as one of the chief beauties of the house.

"If your client believes that your ideas are his own, you have gained your end. You will be wise, then, to allow him to retain the satisfaction of believing himself to be their author."

Vote of Thanks.

Mr. W. H. Ansell, proposing a vote of thanks to Mr. Moberly, said all wise men were not scholars, and all scholars were not wise men, but Mr. Moberly was both a wise man and a scholar. His address was far more than an address to young or old; in its way it was a philosophy of life. He (the speaker) had worked with Mr. Moberly on the Board of Architectural Education for many years, and knew that one could always refer difficulties to him with the assurance that his advice would be right. Mr. Moberly had done a great deal for the cause of architectural education, both at the A.A. and on the R.I.B.A. Board.

Mr. Cecil Eaton, seconding the motion, said he had "sat" as an ordinary member under Mr. Moberly on the Board of Architectural Education, of which Mr. Moberly was chairman, and was struck with the excellence of the general scheme of education as applied and carried out. The Board had not been content with working out a good scheme, but had gone further and tried to get in touch with architectural students direct and to advise them personally on their future careers. Mr. Moberly's address was of interest not only to students but to other members of the audience who were not architects.

The vote of thanks having been carried with acclamation, Mr. Moberly briefly replied.

The President then presented to successful competitors the medals and prizes awarded by the Council for 1935. A list of these was given in our issue for January 18.

WEATHER-VANES

EMBLEMATIC AND HERALDIC.

By E. TYRRELL-GREEN.

The usual shape assumed by a weather-vane is that of the cock, and this form goes back to an early period. Drawings in some Anglo-Saxon MSS. depict it as a finial upon buildings, and we have contemporary testimony to the use of the weathercock in the Bayeux Tapestry of the eleventh century. One of the life-like scenes in this remarkable piece of work shows the funeral procession of King Edward the Confessor approaching Westminster Abbey, and the completion of the church just about the time of the Confessor's death is graphically indicated by the figure of a man upon a ladder, who is engaged in fixing a weathercock upon the gable, while the funeral procession approaches (Fig. 1).

The form of the cock to show the direction of the wind was thus used at an early period, and was also widespread, remaining constant upon church steeples in general. It was probably chosen for this position because the cock is an emblem of vigilance, and is therefore appropriately set upon the house of prayer, for watchfulness and prayer combine to form the characteristic Christian attitude in the world.

The commonest alternative to a weathercock was a metal representation of a little flag (Old English *fane*: German *fahne*: Dutch *vaan*: hence our word *vane*), and since this stands for a banneret it sometimes naturally bears an heraldic device. The earliest extant example of a vane with heraldic blazonry upon a church tower is at Etchingham (Sussex). This bears the *fretty* coat of arms of William of Etchingham (Fig. 2), who built the church and died in 1387, according to the inscription upon his memorial brass within the building. Another good example of heraldic vane surmounts the flagstaff upon the tower of Fotheringhay church (Northants). The church was founded as a Collegiate church by the Dukes of York, and the vane takes the form of the Falcon and Fetterlock, their heraldic badge (Fig. 3). The same device appears on the tombs within the church of Edward Duke of York, leader of the English archers at the battle of Agincourt, and of Richard Duke of York, who was slain at the battle of Wakefield.

In comparison with those just mentioned, the earliest London heraldic vane seems quite modern, for it is about 300 years later in date than the one at Etchingham. This is the one erected above the Library at Lambeth Palace by William Juxon, who had attended Charles I upon the scaffold at Whitehall, and who succeeded Laud as Archbishop of Canterbury after the Restoration (1660-1663). The vane bears the Juxon arms —four black-a-moors' heads—impaled with the arms of the see of Canterbury (Fig. 4). The City of London has an interesting heraldic vane in the Dragon with outstretched wings upon Wren's steeple of St. Mary-le-Bow in Cheapside. This was made in 1680 after a model by Edward Pierce, a pupil and assistant of Wren, and cost £75 (Fig. 5). The dragon is well known as the supporter of the City of London arms, and hence is the City emblem.

It is but seldom that a full coat of arms appears upon a vane, as at Etchingham and Lambeth Palace, but more often the vane takes the form of a crest of a founder or benefactor. Thus, the cupola of the Royal Exchange has for a vane a gilded grasshopper (Fig. 6), the crest of Sir Thomas Gresham, the City merchant who secured for his bourse the patronage of Queen Elizabeth and the title of "The Royal Exchange." The present building, however, is the third upon the site, its predecessors having been destroyed by fire in 1666 and 1838. At Powderham (Devon), near the mouth of the Exe, on the estate of the Courtenay family, the vane on the church tower has suitably taken the form of a Dolphin surmounted by a coronet, the crest of the Courtenays, Earls of Devon (Fig. 7); and another fine example of the use of a crest for a vane occurs at Hanslope (Bucks), where at the apex of the lofty spire is a Greyhound *séjant* with an arrow in its paw, the crest of the Watts family (Fig. 8), whose hatchments are prominent within the church.

While the great ones of the world had their armorial bearings, crests and badges, the saints of the Church had their emblems of distinction, too. Some of these have a Scriptural origin, like the keys of St. Peter, while the emblems of later and non-Biblical saints are generally the instruments of their martyrdom. In some cases the vane appropriately takes the form of the emblem of the patron saint of a church. Thus St. Peter's, Cornhill, bears upon its spire a large erect key for a vane (Fig. 9), while a key set horizontally does the like duty at St. Peter's, Bedford, and St. Peter's-in-Thanet, the old parish church of Broadstairs. St. Peter's, Canterbury, has a more complicated vane, of which an ingenious arrangement of keys forms the setting

Fig. 1.

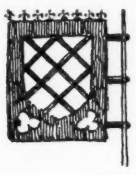


Fig. 2.

Fig. 3.

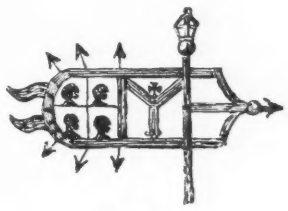


Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

Fig. 8.

Fig. 9.

Fig. 10.

Fig. 11.

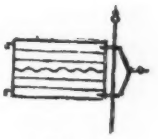


Fig. 12.

Fig. 13.

Fig. 14.

Fig. 15.

Fig. 16.

Fig. 17.

Fig. 18.

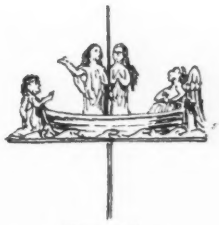


Fig. 19.

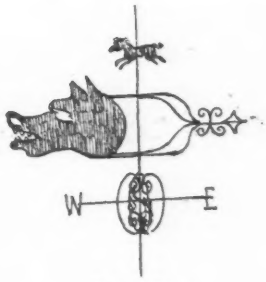


Fig. 20.

Fig. 21.

Fig 22.

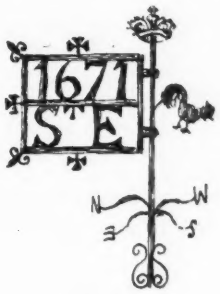


Fig. 23.

Fig. 24.

Fig. 25.

WEATHER VANES.

(Fig. 10). A curious example is the ornate key vane, dated 1831, upon the tower of St. Mary-at-Quay, Ipswich (Fig. 11). The church is so named from its position by the dock-side and to distinguish it from the churches of St. Mary-le-Tower and St. Mary-at-Elms in the same town; but sometimes the name is spelt St. Mary-Key. Hence the punning form of the vane.

The gridiron of St. Laurence, being easily adaptable as a vane, appears upon the spire of St. Laurence Jewry, in the City of London (Fig. 12), and gridiron vanes also allude to the patron saint at Bradfield (Essex), and at St. Laurence-in-Thanet, the old parish church of Ramsgate, the initials S.L. being incorporated into the design in the last-named case. A cognate example occurs at St. Clement Danes, in the Strand, where upon a flag-shaped vane is pierced the anchor emblem of the patron saint (Fig. 13), and similar to this is a pleasing vane at Icklesham (Sussex), where a vane of true banneret form is pierced with a cross *saltire*, the X form upon which St. Andrew, the patron of the church, suffered martyrdom (Fig. 14).

Apart from emblems of particular saints, there are occasional examples of vanes to which religious symbolism of a more general character is attached. Most famous of all such is the female figure in bronze cast by Bartolomé Morel in 1568, representing Faith, and set at the summit of the tower attached to the Cathedral of Seville. The figure carries a large shield and the *labarum* or sacred banner of Constantine bearing the monogram of Christ ( ), and as the *giraldillo* (Spanish for "vane") it has given the name "La Giralda" to the beautiful Moorish tower upon which it stands (Fig. 15). Most ancient, however, of extant figures of this kind is the angel of gilded copper, made in the eleventh century, which forms the finial of the lofty Romanesque spire of the church of Le Dorat, in the Limousin district of France. It is thought that this figure—l'Ange Doré—gave the name *Dorat* to the place that before was known as Scotorium, and it still stands in the place for which it was made, overlooking the picturesque old town (Fig. 16). Though now immobile, it would present of old to every quarter, according to the wind that blew, the tall cross which it bears.

In Apocalyptic symbolism, the Dragon stands for the Evil Spirit against whom the Archangel Michael makes war, and this may account for the adoption of a dragon vane at St. Michael's Church, Sittingbourne (Fig. 17). Dragon vanes, however, are not unusual in North Kent, appearing also above the town halls of Sittingbourne and Maidstone, and above the quaint old Market Hall of Faversham. But the most noted of all dragon vanes is the green dragon of copper that veers above the Belfry of Ghent. This monster is no less than 10 ft. long, has travelled far, and must be centuries old if the legend be true that it was brought from the East by a crusader, who gave it to the city of Bruges, Philip von Artefelde eventually removing it to Ghent (Fig. 18).

From patron saint and religious emblem it is but a step to local legend, and of vanes with allusion of this kind one of the most interesting is that which crowns the reliquary chapel high above the apse of the fortified church that frowns upon the Mediterranean shore in the lonely desert of the Camargue, at the spot known as Les-Saintes-Maries-de-la-Mer. The vane embodies the story which is told to account for the rise of the pilgrimage church and of the little town that has grown up beneath its shelter, and which tells how the three Maries of the Gospels, St. Mary Salome, St. Mary the mother of James, and St. Mary Magdalen, landed there to escape persecution in Palestine. By the vane there is picturesquely exhibited the miraculous arrival of the patron saints in a frail boat guided by an attendant guardian angel (Fig. 19).

Another instance of a vane whose form has been determined by local legend is found at Minster-in-Sheppey. The vane upon the church tower there takes the unusual form of a horse's head, in allusion to the story of Grey Dolphin, the charger of Sir Robert de Shurland (Fig. 20). Grey Dolphin was Sir Robert's favourite steed, and its head, surrounded by waves, is again represented beside the knight's recumbent effigy within the church. According to one version of the legend, the faithful creature, having once been the means of saving the knight's life, eventually, through no fault of its own, became the cause of his death. The whole story has been told in serio-comic vein by R. H. Barham in "The Ingoldsby Legends."

Occasionally we come across a vane whose form alludes to the name of a place. At Watton (Norfolk) is an amusing instance of punning allusion to the name of the town, for the vane of the clock-house in the main street forms a rebus, viz.—a hare (known in the local dialect as a *wat*) with a *tun* beneath (Fig. 21). Similarly, the deer vane at East Dereham church (Norfolk) has obvious reference to the name of the place. Sometimes, however, there is no fanciful play upon a name or cryptic allusion to it, but the name itself is stamped in bold letters upon a flag-like vane, as at the church of Milton-by-Gravesend (Fig. 22).

A large number of vanes bear the date of their erection, and to this class belongs the oldest existing vane in the City of London —St. Ethelburga's, Bishopsgate. The St. Ethelburga's vane has the date 1671 above the letters "St. E." for the patron saint, the more usual weathercock being reduced to diminutive proportions and shouldered to one side to serve as indicator of the direction of the wind (Fig. 23). Another fine vane of similar design surmounts the church tower at Rye (Sussex), and bears the date 1703 below the letters "A. R.," for the then reigning sovereign, Queen Anne (Fig. 24). A plainer dated vane of 1736 over a house in Maidstone is remarkable in that it has the figure of a serpent for a pointer to indicate the direction of the wind in place of the usual arrow (Fig. 25).

NORFOLK AND NORWICH ASSOCIATION OF ARCHITECTS

Annual Meeting.

The annual meeting of the Norfolk and Norwich Association of Architects was held recently at the Music House, King-street, Norwich, at which the President (Mr. E. W. B. Scott, F.R.I.B.A.), presided. The following Officers and Council were elected :— President, E. W. B. Scott, F.R.I.B.A.; ex-president, C. Upcher, F.R.I.B.A.; vice-president, J. O. Bond, F.R.I.B.A.; vice-president (county), H. C. W. Blyth, L.R.I.B.A.; hon. editor, T. G. Scott, F.R.I.B.A.; hon. secretary, E. H. Skipper, F.R.I.B.A.; Council, F. H. Swindells, F.R.I.B.A., S. J. Wearing, F.R.I.B.A., J. N. Meredith, A.R.I.B.A.; associate member of Council, H. J. T. Gowen; hon. auditor, C. H. Dann, A.R.I.B.A.

Prizes offered annually to students were awarded to Mr. M. Hare for measured drawings, first prize; Mr. M. Little for measured drawings, second prize; Mr. C. Hobbis for sketches, prize presented by the President.

Mr. R. O. Bond gave a comprehensive criticism of the drawings received.

Mr. R. A. Horn was elected an associate member of the Association.

Reports were received from members of the Association who serve on the various committees, including the East Norfolk Regional Planning Panel, the Norwich Society, the Caistor Excavation Committee, the Norfolk and Suffolk District Council of the Worshipful Company of Plumbers, from whom it was learned that a great deal of voluntary work is being done for the city and county.

Presidential Address.

Mr. E. W. B. Scott, in the course of his presidential address, said the architectural profession was grossly undervalued in public estimation, and that was partly, at least, their own fault, for two reasons. Firstly, they had been too proud to advertise. That was a crude way of putting it, and, of course, he did not advocate individual advertising, but as a profession they had left the public—those who should have been employing architects—in the dark as to their real function. Architects had been too dignified and superior, and had only just awakened to the discovery that no one knew of their existence. Secondly, architects themselves had not had a sufficiently clear conception of their own job. He supposed they all realised now that the essence of architecture was planning and design, but the public had firmly rooted in its mind that architects were only required to do ornament and "twiddley bits" and generally to increase the cost.

If architects really wanted to "do their bit" let them concentrate on these two points :—

First, in season and out of season to insist that architecture, at any rate to-day, meant and must mean planning, tidiness, design, neighbourliness, and that was the sorely needed service which architects could render. Secondly, to back up their Association and the R.I.B.A. in their publicity campaign. He knew some did not like the word, but they must face up to it. The Institute, with the opening of their new building, and the King and Queen and the Prince of Wales themselves, by their interest, had given a marvellous lead which had awakened a new public interest in architecture throughout the country. That must be followed up. There was interest but not understanding. Their task was to create the appreciation and the understanding which were now lacking. It could be done. The children in the schools, the young men and women in colleges and universities, could be educated. There were vast opportunities in the Press, books, articles, lectures, exhibitions, demonstrations, ceaseless pressure upon local authorities. Everyone could give a hand in one or more of those ways, working in harmony with the central committee at the R.I.B.A.

Referring to local problems, the speaker said it ought to be obvious that in a city like Norwich, with its precious heritage from past centuries struggling for survival, and the new age struggling to be born, their knowledge and experience could not be neglected without serious loss. Yet they had been compelled to stand by year in and year out and see fatal mistakes made on all sides. Now, more than ever, was the time for them to speak. Whether they liked it or not, the face of Norwich would be changed within the next few years. Whole areas and thousands of buildings would disappear in connection with slum clearance and other developments. All those would gradually be rebuilt in blocks of flats, industrial buildings, etc. They were fortunate in their city architect, but one man could not do everything. Were the architects to be given their chance?

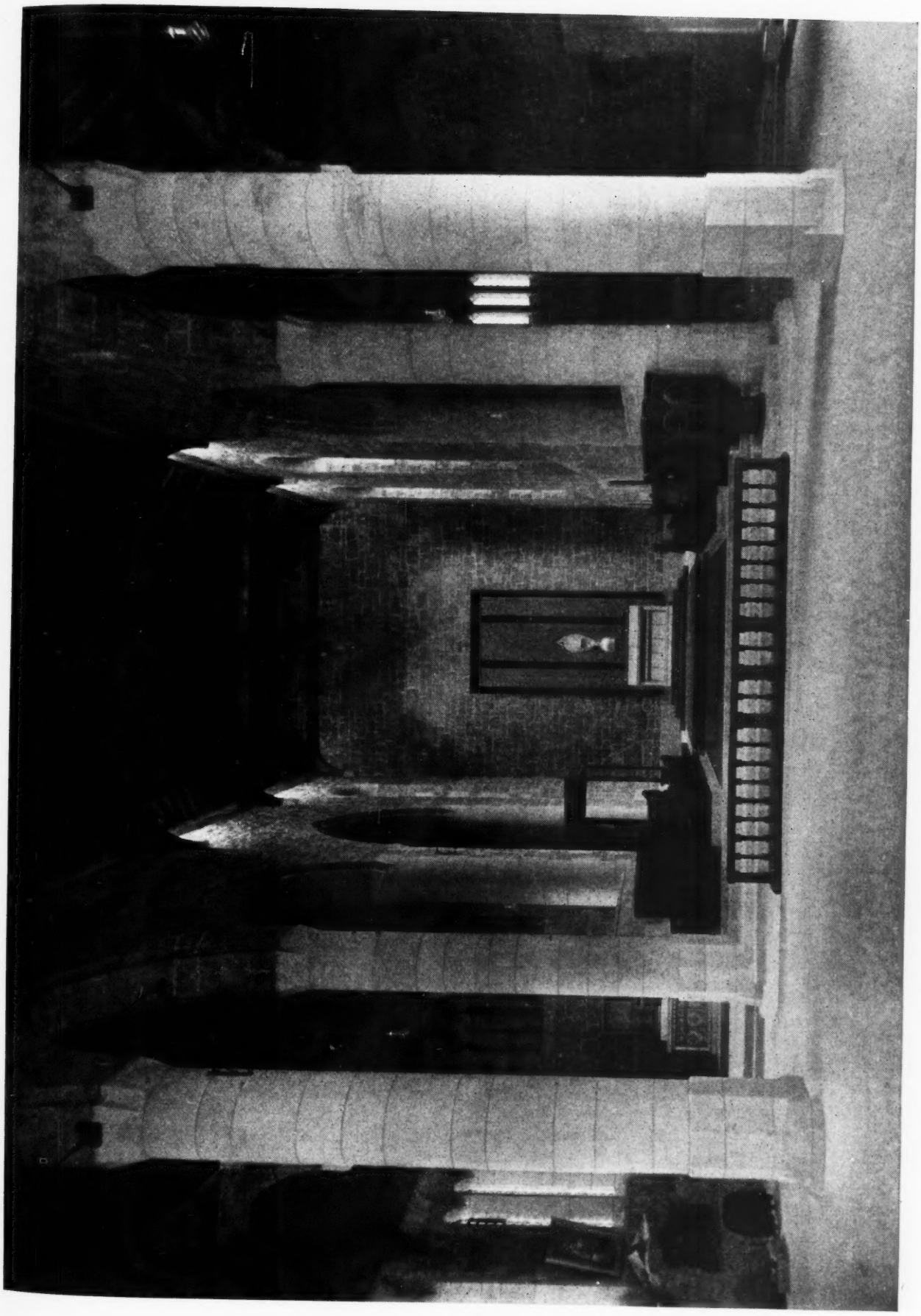
THE BRITISH INDUSTRIES FAIR

Sir Harry McGowan, chairman of Imperial Chemical Industries, Ltd., in the course of a letter, refers to the announcement of the nations sending most buyers to the British Industries Fair which opens in London this month. These, he writes, "coincide almost exactly with the list of countries which increased their imports of British goods during the first nine months of 1934. We sent more goods to Holland, Denmark, Italy, Belgium, Sweden, Norway, and Switzerland, all of them countries from which large numbers of buyers will arrive in London in February, and in Birmingham when the Engineering and Hardware Section opens in May. Our Fair, in short, is a fine example of results to be gained for British manufacturers and the workpeople, by intelligent planning and steady work from year to year, and the Fair is, in my opinion, worthy of the support of all those connected with the industry and commerce of the country. We can with profit study the method of its achievement and refrain from taking prosperity for granted."

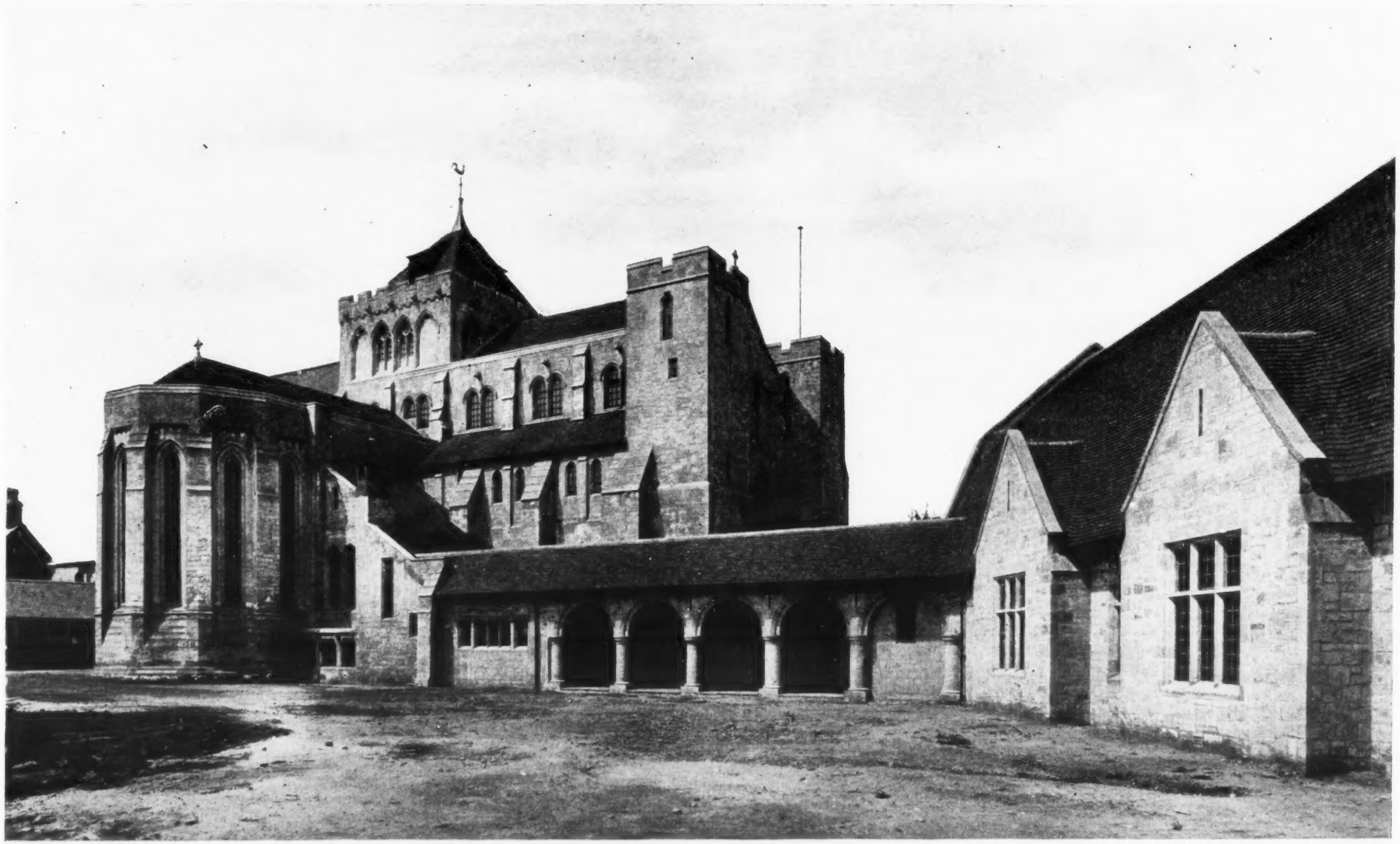
THE ROMAN CATHOLIC CATHEDRAL, OBAN : View From South Aisle.

SIR GILES GILBERT SCOTT, R.A., P.R.I.B.A., Architect.

(See page 235.)



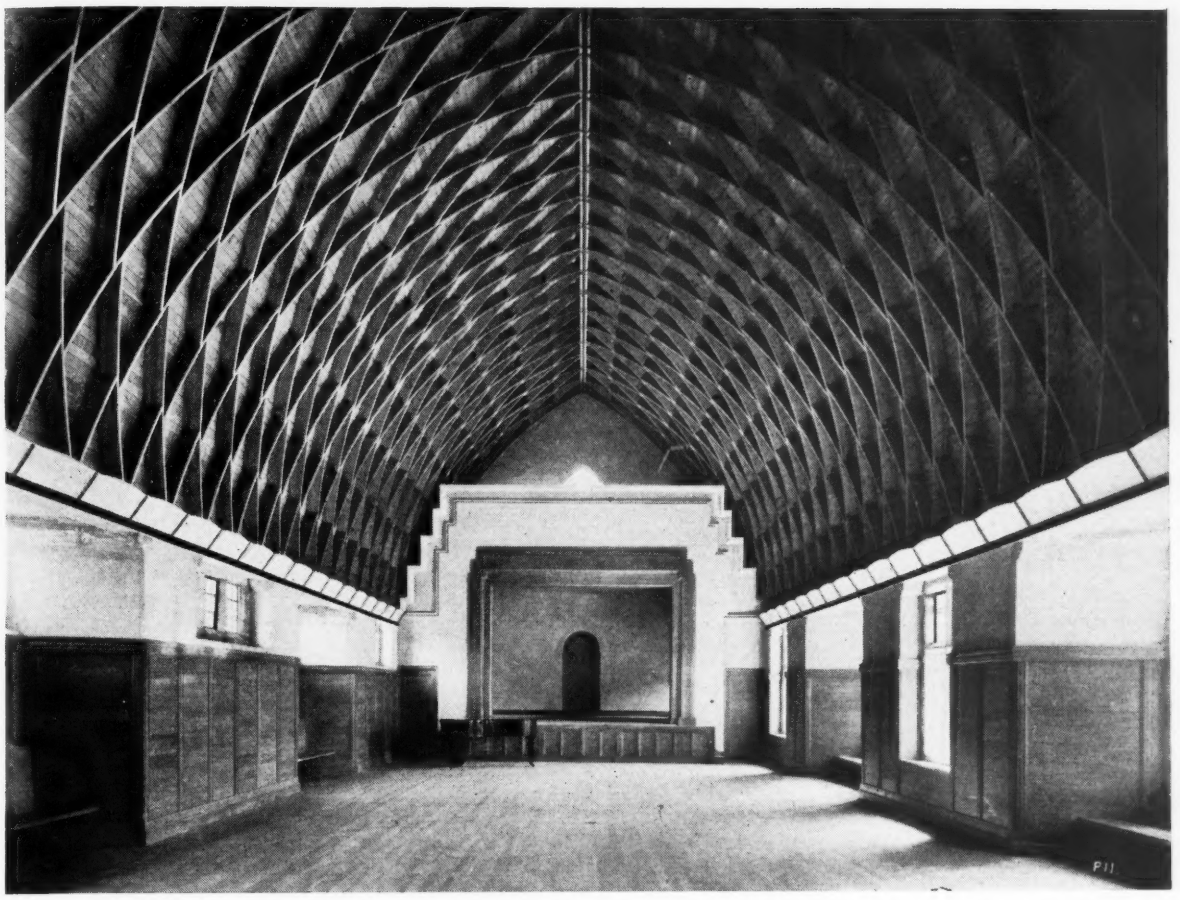
THE ROMAN CATHOLIC CATHEDRAL, OBAN : View of Nave, showing Floodlighting.
SIR GILES GILBERT SCOTT, R.A., P.R.I.B.A., Architect.
(See page 235.)



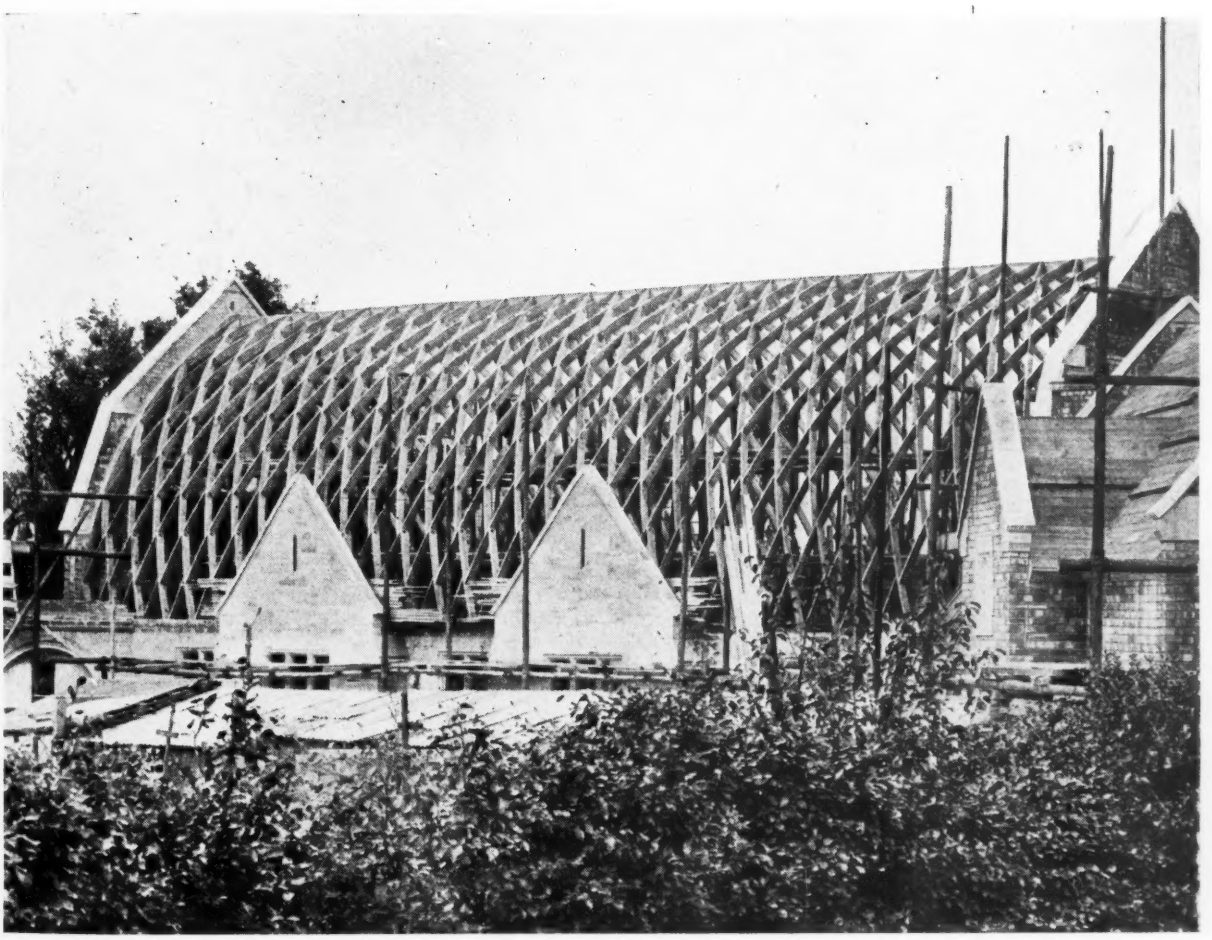
ST. WILFRID'S CHURCH, HARROGATE : VIEW FROM SOUTH-EAST, SHOWING CHURCH HALL ON RIGHT.

The late TEMPLE MOORE, Architect for Church ;. MR. LESLIE MOORE, F.R.I.B.A., Architect for Hall and Additions.

(See page 235.)



THE INTERIOR.

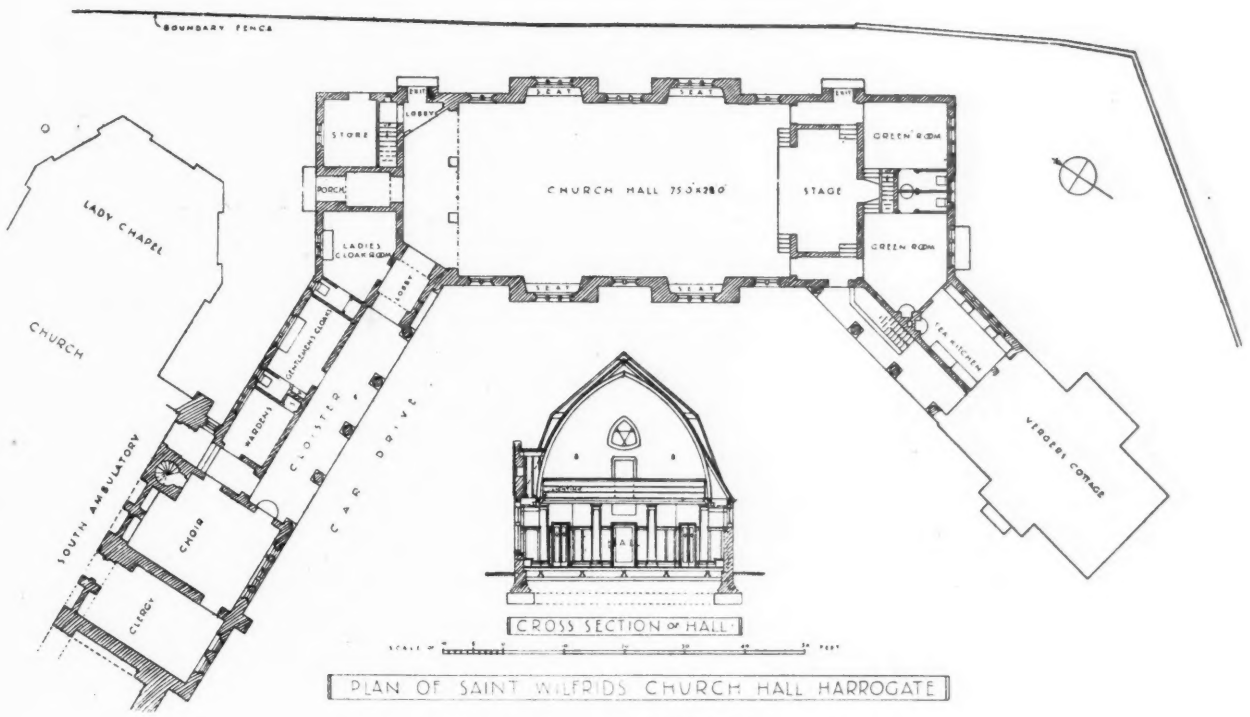


PROGRESS VIEW.

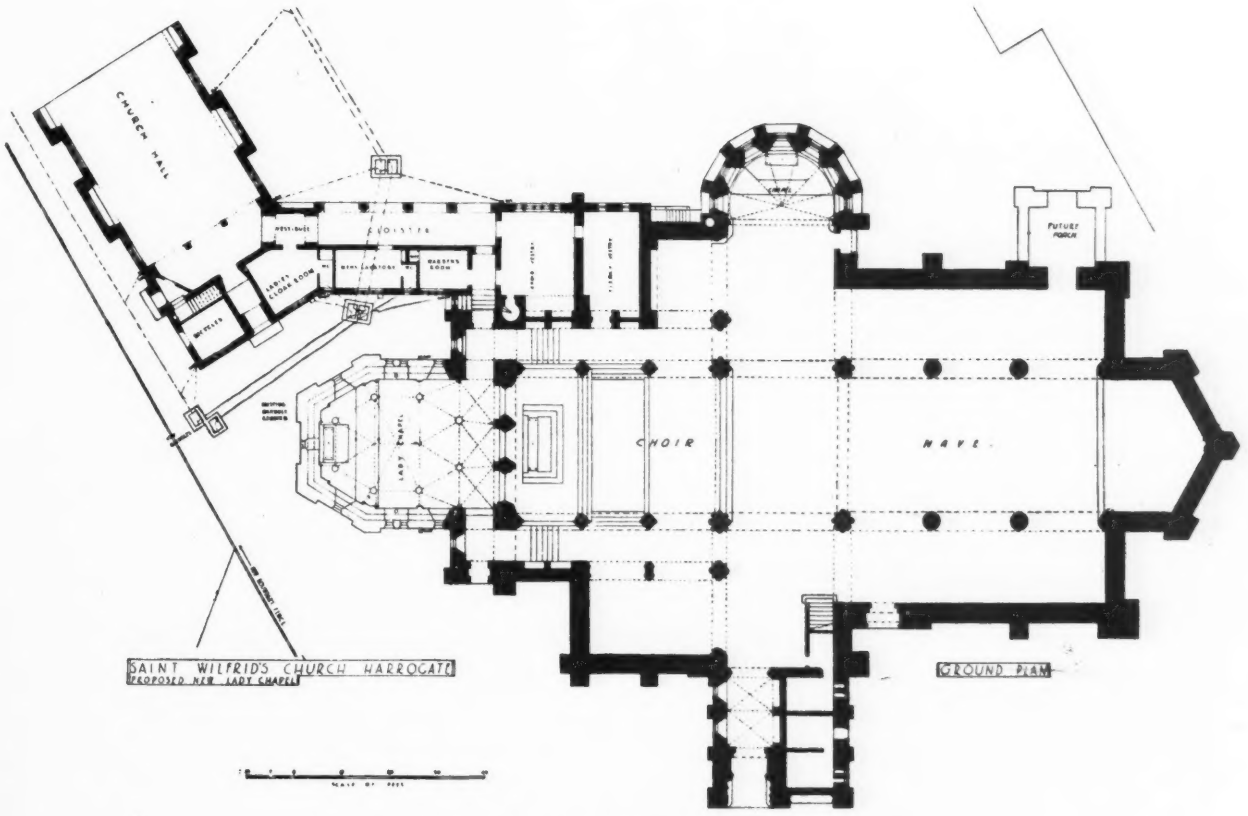
ST. WILFRID'S CHURCH, HARROGATE : The Church Hall.

MR. LESLIE MOORE, F.R.I.B.A., Architect.

(See page 235).



PLAN OF HALL, CLOISTERS, Etc.

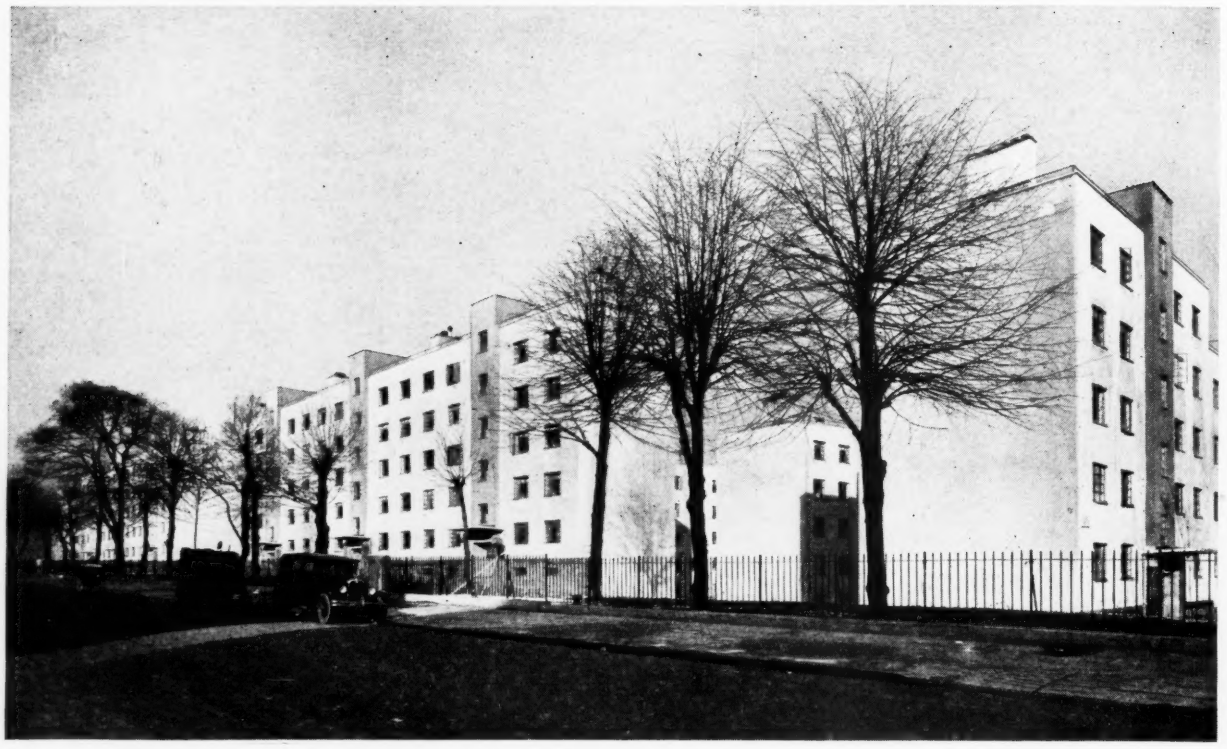


GROUND PLAN OF CHURCH, HALL AND PROPOSED LADY CHAPEL.

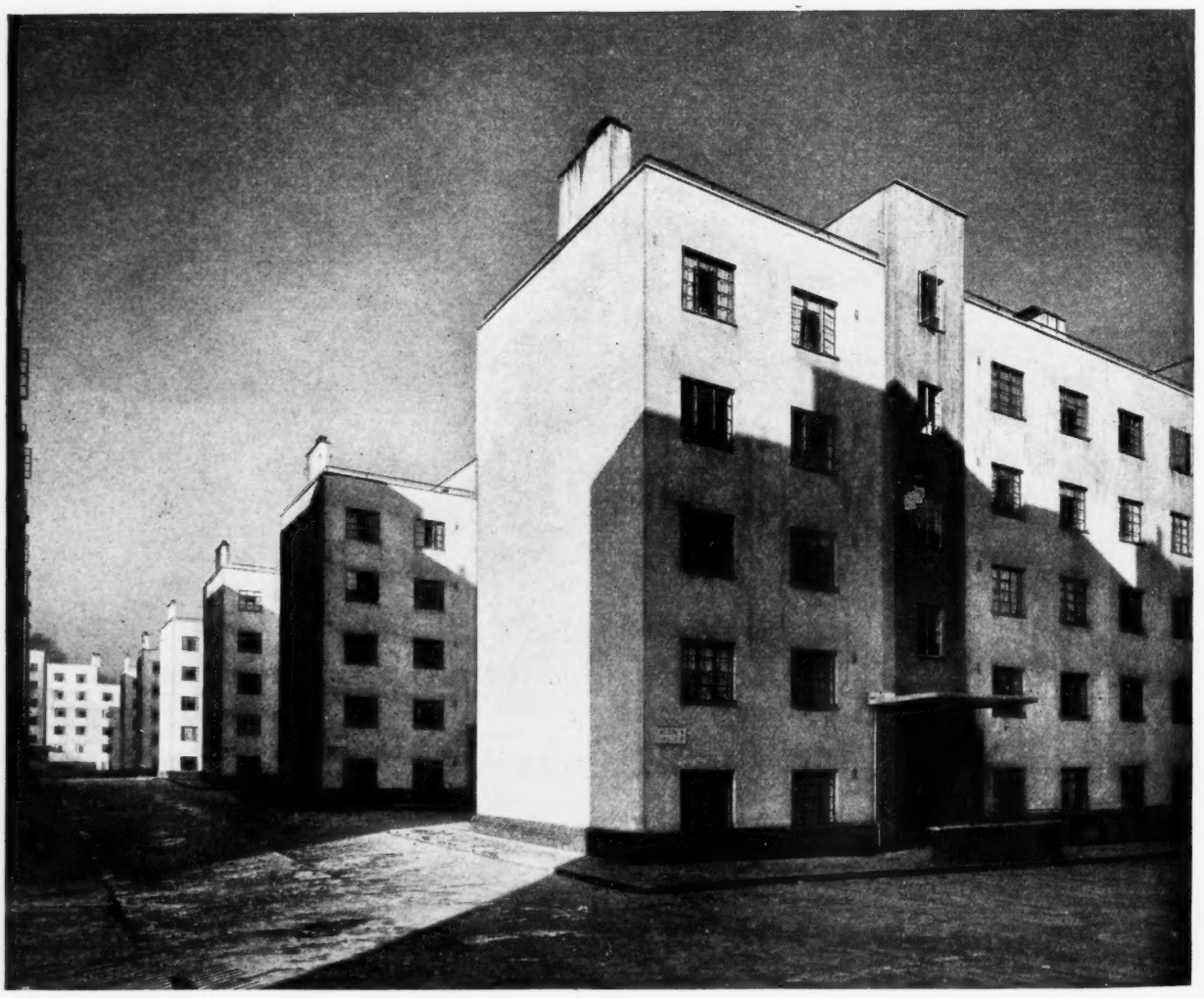
ST. WILFRID'S CHURCH, HARROGATE.

The Late TEMPLE MOORE, Architect for Church; MR. LESLIE MOORE, F.R.I.B.A., Architect for Hall and Additions.

(See page 235).



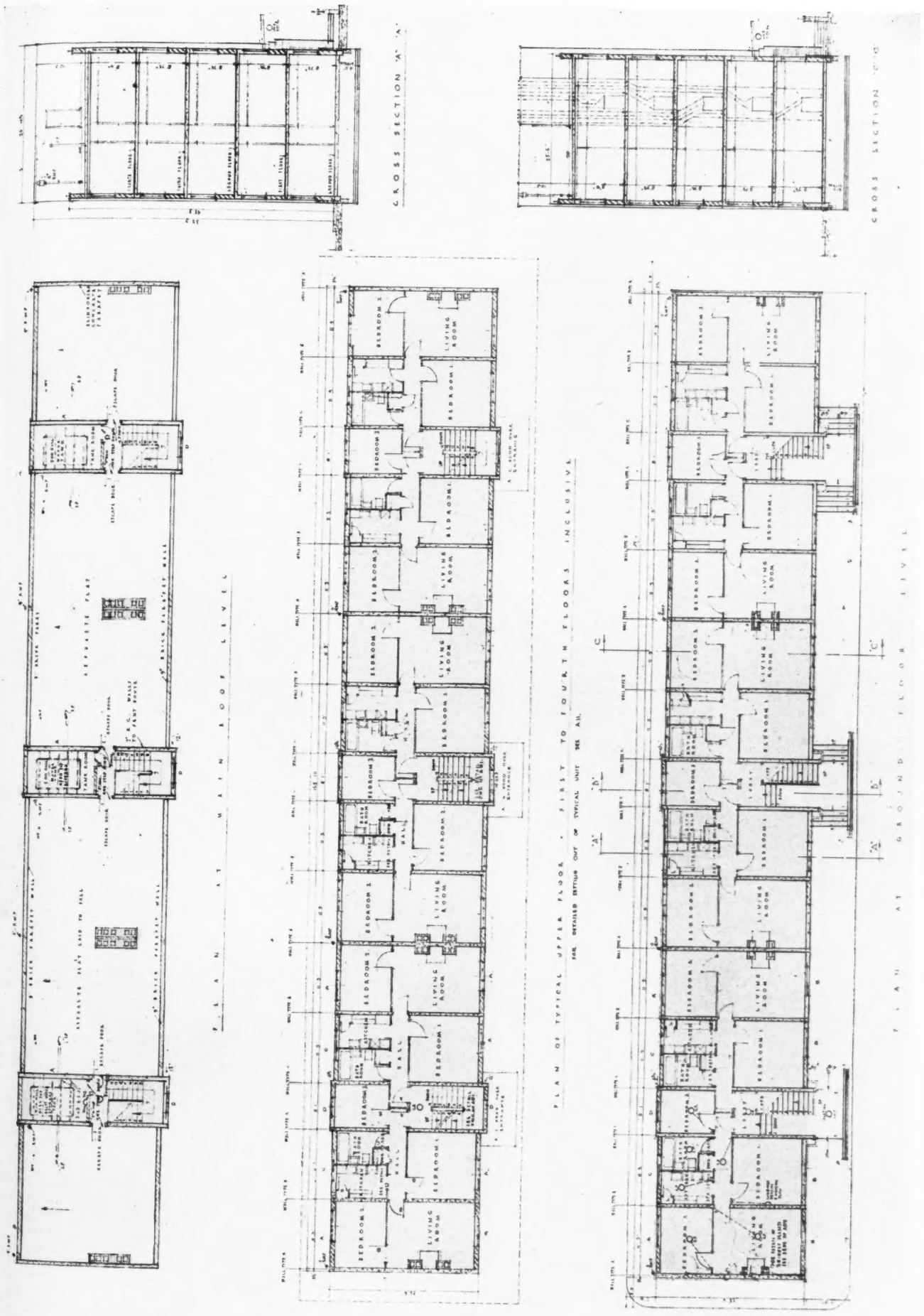
GENERAL VIEW.



DETAIL OF BLOCKS.

FLATS, "EVELYN COURT," AMHURST ROAD, HACKNEY, E.

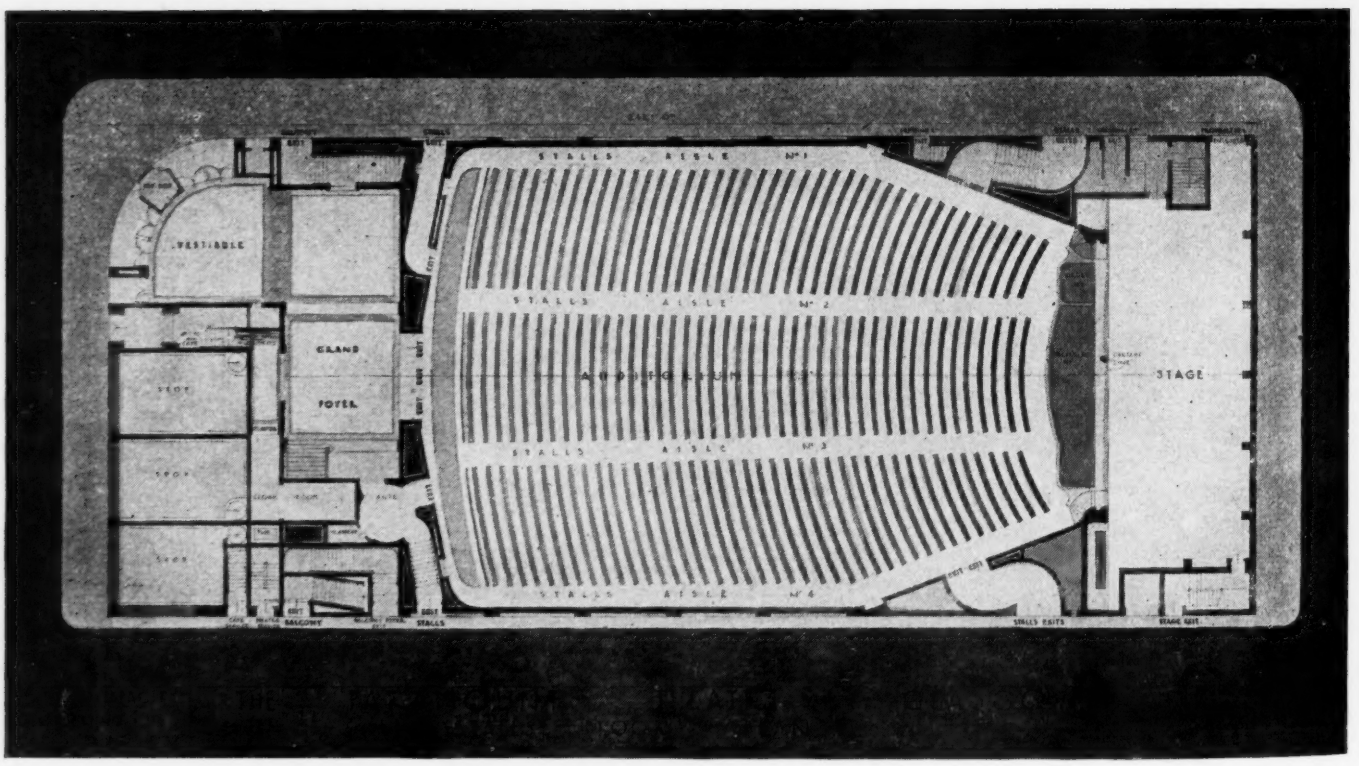
SIR JOHN BURNET, TAIT AND LORNE, Architects.


CROSS SECTION 'A' 'A'
CROSS SECTION 'B' 'B'
PLAN AT MAIN ROOF LEVEL
PLAN OF TYPICAL UPPER FLOOR - FIRST TO FOURTH FLOORS INCLUSIVE
FOR DETAILED SETTING OUT OF TYPICAL UNIT SEE A.31.
PLAN AT GROUND FLOOR LEVEL
BEDROOM 1
BEDROOM 2
BEDROOM 3
LIVING ROOM
HALL

FLATS, "EVELYN COURT," AMHURST ROAD, HACKNEY, E.
SIR JOHN BURNET, TAIT AND LORNE, Architects.
(See page 235.)

Paramount
PARAMOUNT
ON THE STAGE FRANCIS X MANGAN
PRESENTS THE "VOLCANO"
BING CROSBY MIRIAM HOPKINS
"SHE LOVES ME NOT"
ON THE STAGE TEDDY JOYCE & HIS BAND
HENRY CROUDSON ON THE MIGHTY ORGAN

THE EXTERIOR, FLOODLIT.



STALLS FLOOR PLAN.

THE PARAMOUNT THEATRE, RENFIELD STREET, GLASGOW.

MESSRS. F. T. VERITY AND S. BEVERLEY, FF.R.I.B.A., Architects.

(See page 235.)

THE PARAMOUNT THEATRE, RENFIELD STREET, GLASGOW : View from Back of Circle.

MESSRS. F. T. VERITY AND S. BEVERLEY, FF.R.I.B.A., Architects.

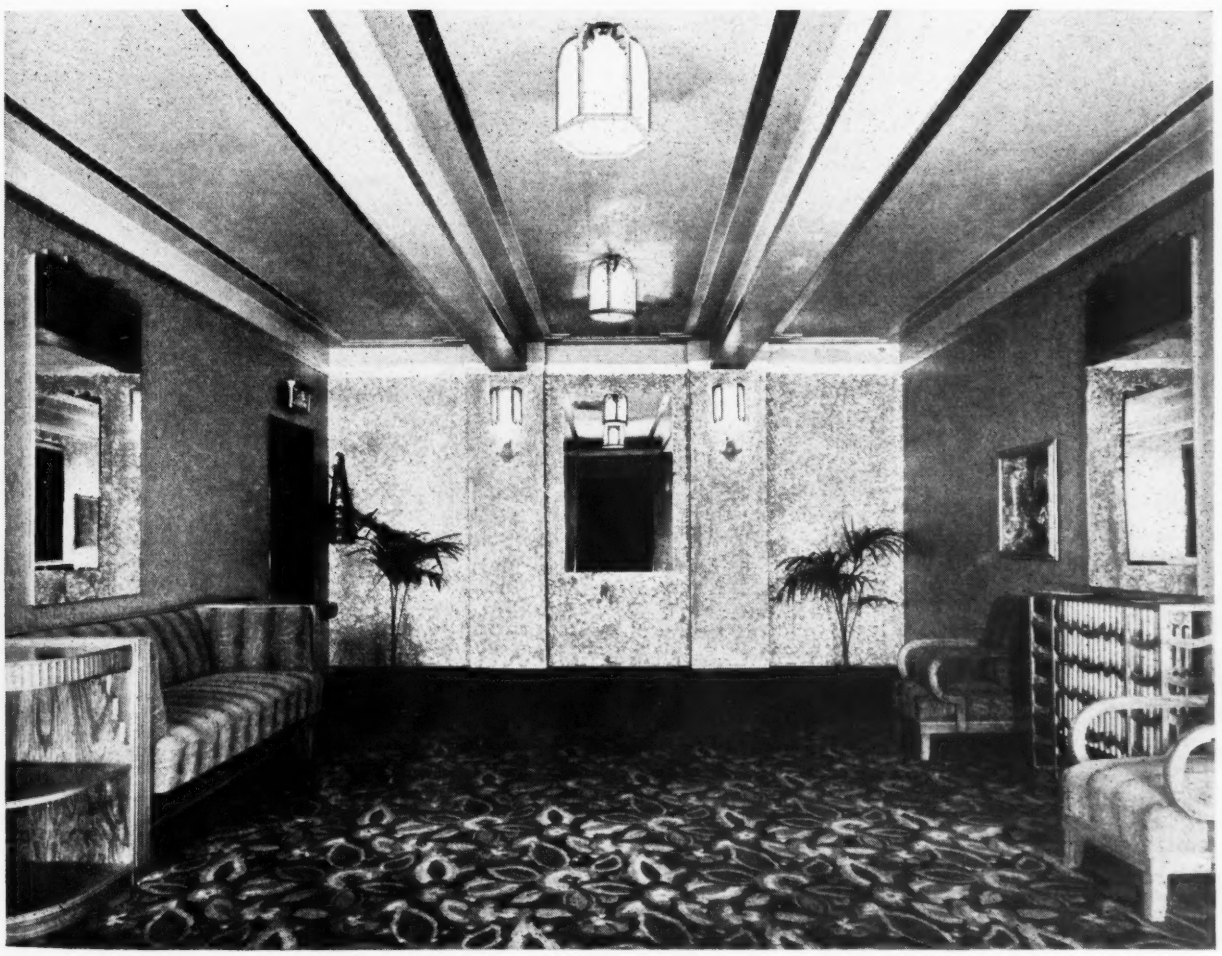
(See page 235.)

THE PARAMOUNT THEATRE, RENFIELD STREET, GLASGOW : The Tea Room.

MESSRS. F. T. VERITY AND S. BEVERLEY, FF.R.I.B.A., Architects.

(See page 235.)

PUBLIC LOUNGE



BALCONY FOYER.

THE PARAMOUNT THEATRE, RENFIELD STREET, GLASGOW.

MESSRS. F. T. VERITY AND S. BEVERLEY, FF.R.I.B.A., Architects.

CENSUS (1931) REPORT ON HOUSING

THE issue of a separate Census Report of Housing statistics* is an innovation brought about by the prevailing interest in the subject of housing. There is much of significance and interest in the volume, and not a little that is disturbing.

Chapter 2 deals with Dwellings. At 1931 there were 9,399,535 structurally separate dwellings (p. ix). Numerically this shows an increase exceeding that of all previous intercensal periods, being 1,421,000 dwellings, or over 60 per cent., in excess of any previous decennial increase.

It is not without interest to note in Chapter 3 a special study of the 1931 and previous statistics of vacant dwellings. In 1931, no fewer than 276,256 dwellings were vacant, and of these 161,160 (1.7 per cent.) were tenantless and would appear to be available as surplus housing accommodation. It must not be forgotten, however, that many of these are large mansions in districts not suitable for the housing of poorer-paid classes; nor, in all probability, are many of these houses of a type that would repay sub-division into better-class flats.

The Distribution of Private Dwellings.

Chapter 4 deals with the other element in the combination which constitutes housing, viz., the number, increase and size-distribution of "private families." In 1931 there were enumerated 10,233,139 private families, exceeding the corresponding number in 1921 by 1,493,942. As housing demands are largely governed by the numbers of private families, some analysis is included of the factors determining the increase in the numbers and size of such families (pp. xv and xvi). On p. xiv and in Table 3 it is pointed out that private families are continuing to decline in size.

As the rate of increase in 1921/1931 was 17.1 per cent., as compared with an increase of 10 per cent. only in 1911/1921, there seemed to be some need for special investigation. This is described in Chapter 5; and the conclusion reached is that, although the increase for the 20 years as a whole was approximately normal, the severe housing shortage which prevailed up to 1921 and some time after checked and interrupted the normal flow of new family creation, with the result that a large proportion of it did not materialise till the second of the two decennia. In normal circumstances the number of families would have increased more in the first decennium than in the second. "To the observer seeking for some statistical expression of the post-War housing hardships," states the Report, "it had previously been somewhat difficult (leaving out of account the very real but imponderable psychological aspects of the matter) to identify the material grounds for the grave public dissatisfaction which undoubtedly prevailed at 1921 and for some time after. The change, such as it was, between the 1911 and the 1921 situation, judged by the general statistical criteria then available, was hardly so marked as to afford an explanation. Much is explained, however, by the fact that, as it now appears, between 300,000 and 400,000 groups of persons, who but for the house shortage would have set up as separate families, were obliged to live in the closest domestic contact with other persons from whom they desired to separate themselves. This was the position in 1921; and the numbers may have increased for some years before they began to be reduced. The radical hardship of the situation, which thus affected nearly double the number of potentially separate families, lay not so much in any conditions of overcrowding as in the denial of that privacy and independence which are the distinguishing features of "the Englishman's castle."

Chapter 6 deals with the relative merits of the housing conditions in England and Wales according to the criteria based upon numerical density, viz., the number of persons per room. The 1931 position and a comparison of it with that at previous census dates is discussed and illustrated in a number of tables. "It will be seen," the report continues, "that there has been in general a very marked improvement in the housing position during the past intercensal period, contrasting with the movements in the preceding war decennium. The adverse feature of the returns is the persistent and unyielding continuance of the small class embracing families housed at the incredibly bad densities of four or more persons per room."

The Density of Families.

Table IX. shows that the number of families housed at densities exceeding two persons per room "is now lower than any previously recorded: proportionately the present figure is less than half what it was in 1891. The latest improvement is not unlike that of the period 1891-1901 and, stands out in very favourable contrast to the movement during the first twenty years of the present century." It is shown, however, that when families are classified by sizes there has been practically no change in the average density for each size of family (p. xxiv. and Table X). The improvement is almost wholly due to the fact that there are proportionately fewer of the larger and worse housed families and proportionately more of the smaller and better housed families.

With the closer study of housing problems in recent years increasing emphasis has been placed upon the construction of standards of housing sufficiency according to a formula embracing considerations such as the necessity for sex separation in bedrooms and the different space requirements of children and adults. The application of any of these standards requires elaborate particulars as to the composition of each family—whether a married couple is present or not, the number of children, and the number of unmarried adults of either sex. It accordingly seemed necessary to investigate the composition of families in these respects for two reasons: (a) to provide material which would pave the way for further study of the whole subject; and (b) to ascertain what relation, if any, existed between a scale of values based upon housing standards of this kind and those based upon pure numerical density.

A "Census Standard."

In the absence of any national standard a "census standard" had to be constructed for the purpose (p. xxvii.). This census standard was then applied to sample data in the form of the population and families of (a) 95 of the worst housed London wards; (b) the whole of Camberwell Metropolitan Borough; and (c) the whole of Sheffield County Borough. The results are discussed in pp. xxix.-xxxiii. The most striking point is that the proportions of families which are sub-standard according to the census standard, viz., 15.3 per cent., 5.8 per cent. and 4.3 per cent., correspond very closely to the proportions at numerical densities over two persons per room, viz., 14.9 per cent., 5.9 per cent. and 4.5 per cent. The same correspondence is found as regards the population of these families, and as regards the families and populations taken separately ward by ward, i.e., in 133 separate ward units (see Appendix Table F.). The London Survey standard was also applied to the sample material. That standard is a higher one than the census standard, and yielded sub-standard proportions of 27 per cent., 12 per cent. and 8.7 per cent. These correspond very closely to the higher density class of two or more persons per room, viz., 27.4 per cent., 12 per cent. and 8.7 per cent.

"Here then" (says the Report) "we have further evidence of correspondence between a density test and a formula test, but at a different level, viz., two or more persons per room instead of more than two persons per room. It seems highly probable from the nature of the classification that a similar correspondence would be found to hold good in respect of other standards of like character, and that, in the light of the experience now available, it might not be difficult to construct a simple density test having equivalent results to those of any particular housing standard. If so, it would mean that when contact had once been established between formula and density by experiment upon some sample data . . . we should have in the density classification available throughout the Census Reports a ready instrument with which could be ascertained the existing amount of sub-standard housing according to the given formula for all areas in the country" (p. xxxiv.).

In the light of the foregoing some criticism follows of certain proposals that the numerical density of 1½ persons per room should be adopted as a definite minimum standard for practical housing policy.

Chapter 9 deals with the occupation of dwellings by more than one family, with particular reference to sample information in the form of a special analysis of the families and population of Manchester County Borough. Contrary to belief in some quarters, "sharing" families are not as a class badly housed. In Manchester 3,089 sharing families were housed at densities exceeding two persons per room, while 4,079 non-sharing families were similarly housed. Table XV shows that, comparing families of the same sized units of occupation (*i.e.*, groups of rooms occupied), the advantage is uniformly with the sharing as against the non-sharing family. This is typical of the whole country.

Chapter 10 contains a special analysis from sample material of controlled post-war housing estates. It discloses the presence of various proportions of overcrowding, notwithstanding the supervision to which these estates are subject, coupled with the presence of quite significant proportions of families housed at the comparatively luxurious density of two rooms per person (p. xlviii).

Chapter 12 illustrates the contribution which might be made by census data in the estimation of the number of houses required to be built by 1941, mainly on the lines of a forecast of the 1941 population and number of families. "The course adopted in these calculations is to estimate the number of dwellings which would be required in 1941 to house the contemporary population and families on the scale and level applicable to 1931, and then to make such further allowances as seemed appropriate in respect of the acknowledged defects in the 1931 conditions and the accepted policy in regard to their elimination." The "further allowances" made are generally in round figures, and do not claim any special authority or precise statistical justification. For the reasons stated, no separate allowance is made for building expressly required for the abatement of overcrowding. On the forecasts and other figures employed a total of about 1,700,000 new houses is indicated between 1931 and 1941, of which 800,000 were apparently already built by September 30, 1934.

* Census of England and Wales, 1931. Housing Report and Tables. H.M. Stationery Offices. Price 6s. 6d. net.

EXHIBITION OF WORKING-CLASS FLATS.

An exhibition of working-class flats was opened at the offices of the Ministry of Health, Whitehall, S.W.1, on Tuesday, and will remain open till Monday, February 11, 11 a.m. to 5 p.m. weekdays; Saturdays, 11 a.m. to 1 p.m. The material has been supplied by local authorities, the R.I.B.A., the Housing Centre, the Building Centre, a number of housing associations and private individuals, and includes many important schemes from various parts of the country as well as Continental examples.

The development of design and planning, with the provision of amenities, is well illustrated. The private balcony is a notable feature. On the evidence of this exhibition alone, there can be no doubt that, where the population has to be rehoused near the present site, the erection of blocks of flats facilitates the clearing of the slums and the relief of overcrowding and the provision of comfortable working-class dwellings of a good standard. A selection of the material is being displayed in the House of Commons.

ILLUSTRATIONS

PLATES

Oban Cathedral.

Two-thirds of the Roman Catholic Cathedral at Oban, the seat of the diocese of Argyll and the Isles, has recently been opened, and is being used for Mass. The remaining portion will be completed, it is hoped, in two years' time. Built in grey and red Scottish granite, the cathedral is on the Esplanade. We now give two interior views. Elevations, sections and plans appeared in our issue for September 23, 1932. The architect is Sir Giles Gilbert Scott, R.A., P.R.I.B.A.

St. Wilfrid's Church, Harrogate.

The building of St. Wilfrid's Church started in 1906, the nave and aisles being completed in 1910. The chancel and tower were added in 1912-15, all being carried out to the late Mr. Temple Moore's designs, including the screens and fittings generally. In 1926 the south transept, which is in the form of an apse, was completed to the design of Mr. Leslie Moore, F.R.I.B.A., and the north transept containing the organ was also built.

Recently the vestries and a church hall, together with a verger's cottage, have been completed to Mr. Moore's design. He is at the present time engaged in adding a lady chapel at the east end of the church, which will form a crowning feature to the plan. The walls are 4 ft. thick, carrying a concrete vault covered with copper roofing. The construction of the roof to the church hall is unusual, being on the Lamella trussless principle. It is formed of 8 in. by 1½ in. wrot and shaped Columbian pine "Lamellas." These interlace in the form of a diamond pattern, the joints being splayed, butted, and secured with ⅜ in. diameter ring bolts. The exposed roof boarding is of ¾ in. wrot Columbian pine.

Externally the roof takes the form of a mansard, small packing rafters being fixed at ridge and eaves to carry tiler's battens for the hand-made, sand-faced tiles with which the roof is covered. Internally the roof has been decorated by gilding the edges of the Lamella, and painting the bolt heads vermilion. The electric lighting is arranged at plate level, which gives the roof construction a decorative effect at night. This form of roof allows of Badminton being played, and acoustically the hall is very successful. The flooring dado and doors are of English oak. Pavings are of Hopton wood.

The general contractors were Messrs. Wm. Nicholson and Son, Ltd., of Leeds. The principal sub-contractors include: The Merchant Trading Co., Ltd., timber roofing; Ames and Finnis, roofing tiles; Tyler and Freeman, electric lighting.

"Evelyn Court," Amhurst-road, Hackney.

This group of buildings for the Four per Cent. Industrial Dwellings Co., of which Mr. Anthony de Rothschild is chairman, is one of the largest and most interesting attempts to solve the problem of providing up-to-date housing on an economic basis without resorting to assistance from the subsidy. The estate consists of ten blocks comprising 320 flats of three and four rooms on five floors, and on the ground floor of the two front blocks are provided heated drying rooms, pram. stores, and children's playrooms. In addition to the main buildings a cottage, office and workshop have been built for the resident superintendent, while low brick out-buildings for the garbage containers and a transformer kiosk are included. The grounds are being laid out as gardens, and trees are being planted in the courts.

The buildings, finished externally in a sparkling white rendering set off by green staircase towers and brown brick plinths, are constructed on an unusual type of reinforced concrete frame with brick panel walls. The frame, monolithic throughout its length, is of particular interest in view of the great attention that was paid to standardisation of all details, such as shuttering and reinforcement, the former being of specially designed interchangeable units, and the latter using a standard spacing and only two diameters of bar throughout the walls and floors. Careful organisation on the site of the time distribution enabled the concreting to be carried out continuously and rapidly, thus avoiding the usual chuting, barrows and segregation of the aggregate. Sound and heat insulation is provided between the flats both horizontally and vertically by the use of insulation boards, the former being used as floor shuttering and remaining in position to form a ceiling which affords a good reduction in reverberation. The mass of the floors and walls combined with the absorption of the boards offer an excellent resistance to air borne sound, while structural impact transmission is considerably minimised by the linoleum on mastic provided as the standard floor finish.

Windows are standard metal wide flange frames, outward opening with "easy-clean" hinges. The doors are flush ply-faced skeleton framed, hung in standard pressed metal frames built in with the partitions. Other items, such as skirtings and picture rails, were specially detailed to obviate any possibility of vermin finding harbourage. The kitchen and bathroom units are standardised throughout, and being grouped together enable plumbing and other service runs to be shortened and simplified. Hot water is provided to the bath, basin, and sink by instantaneous gas-operated water-heaters. The flats are equipped throughout with electric light on separate meters, while the courts and stairs are controlled by time switches. The architects are Messrs. Burnet, Tait and Lorne, and Messrs. Holland and Hannen and Cubitts, Ltd., are the general contractors.

Following are among the sub-contractors: Willment, Ltd., demolition; Scaffolding (Gt. Britain), Ltd., scaffolding; W. C. Youngman, special shuttering; T. W. Palmer and Co., iron railings, gates, etc.; Brown and Tawse, Ltd., staircases, etc.; D. G. Somerville and Co., Ltd., precast spandril steps; Ames and Finnis, facing bricks; Fredk. Braby and Co., pressed steel skirtings and door frames; Celotex Co. of Great Britain, Ltd., Celotex board; Henry Hope and Sons, Ltd., metal windows; Limmer and Trinidad Lake Asphalt Co., Ltd., asphalting; Grano-Metallic Paving and Plastering Co., plastering and granolithic; Matthew Hall and Co., Ltd., plumbing; Holland and Hannen and Cubitts, Ltd., joinery and electrical work; Compton Bros., glazing; Modern Surfaces, Ltd., painting; J. M. Pirie and Co. (London), Ltd., ironmongery; and Catesbys, Ltd., linoleum.

The Paramount Theatre, Glasgow.

The exterior of the building is a striking addition to the architecture of Renfield-street. The exterior illumination has been designed as an integral part of the structure. The auditorium has also been designed by the architects in a modern manner. An effect of intimacy has been obtained in the decorative scheme. The dominant tones in the decoration are copper, green, and silver. The various foyers, waiting spaces, lounges, cloak-rooms, lobbies, and the tea-room, while being treated as part of the whole scheme, have each been individually attended to, so that in construction, decoration and furnishing the theatre is throughout in harmony. The seating capacity is 1,760 in the stalls, and 1,024 in the balcony, royal circle, and grand circle, making a total of 2,784 seats. The theatre has been planned so that everyone seated in the auditorium can see the whole of the stage with the screen undistorted. The building has been treated scientifically as regards acoustics. The seating has been given generous spacing in order to give maximum comfort.

The architects, Messrs. F. T. Verity and S. Beverley, FF.R.I.B.A., have had the assistance of Mr. James W. Reid, A.R.I.A.S., who has taken part in the supervision of the construction of the building; Mr. Evan H. Perkins, Paramount director of construction; Major C. H. Bell, O.B.E., consultant for the electrical and mechanical engineering work; and Messrs. S. W. Budd, consultants for the structural steelwork.

The general contractors are Messrs. Robert Rogerson and Co., of Scotstoun, Glasgow, and among the sub-contractors are: Samuel B. Allison, Ltd., demolition; Redpath, Brown and Co., Ltd., steelwork; Stuarts Granolithic Company, Ltd., stonework; Carrier Engineering Company, Ltd., heating and ventilating; Clark and Fenn, Ltd., fibrous plaster; Newall's Acoustics, Ltd., and Turner's Asbestos Cement Products, Ltd., acoustic plaster and treatment; Knight and Co. (Engineers), Ltd., fire curtain, organ console lift, orchestra lift; John Hall and Sons, Ltd., miscellaneous ironwork; Henry Hope, Ltd., metal windows; George Jennings (Lambeth), Ltd., sanitary fittings; W. Draper and Co. (Electrical Installations), Ltd., electrical installations; Sturtevant Engineering Co., Ltd., vacuum cleaning plant; Hoffmann Sprinkler Co., Ltd., fire appliances, etc.; Gimson and Co., Ltd. (Leicester), counterweighting; Mellowes and Co., Ltd., stage lantern light; Richard Hill and Co., Ltd., balcony reinforcement; Toffolo, Jackson and Co., tiling and terrazzo; N. F. Ramsay and Co., Ltd., hardware; Smith and Co., ornamental metalwork; Robert Rogerson and Co., general painting; Pixton and Co., seating; T. F. Firth and Sons, Ltd., carpets; William Still and Co., Ltd., tea-room equipment; Best and Lloyd, Ltd., electric light fittings; Joseph Nerini, decorative painting; Boro' Electric Signs, Ltd., neon signs; G. Wallis and Sons, Ltd., special furniture; Eaton, Parr and Gibson, Ltd., mirrors; Lusty and Sons, café furniture; John Compton Organ Co., organ; Western Electric Co., organ amplifier system; Frank Brockliss, Ltd., projection-room equipment; J. Macfarlane and Sons, Ltd., marquise.

ATMOSPHERIC POLLUTION

Thirty-two representatives of local authorities and other organisations co-operating with the Department of Scientific and Industrial Research in the investigation of atmospheric pollution met recently in the half-yearly conference at the offices of the Department. The gathering included representatives from London, Manchester, Glasgow, Liverpool, Southampton, Leicester, Newcastle, Hull, Scarborough, Halifax, Lancaster, Leamington and Wolverhampton.

The conference, over which Councillor W. Brownhill-Smith, of Glasgow, presided, received a report from Dr. G. M. B. Dobson, F.R.S., on the progress of the researches carried out under the Atmospheric Pollution Research Committee. Dr. Dobson stated that the new method which had been developed at the Building Research Station for estimating sulphur in the atmosphere was now being used at 27 stations. It was hoped that it would be adopted still more widely by local authorities, as it gave, with little expense, information of great value concerning one of the most destructive of atmospheric impurities. He also referred to trials which were being made of a photo-electric method for recording daylight. If successful, this method would provide a virtually automatic means for measuring the amount of the sun's ultra-violet light cut off by smoke haze.

Mr. Beaumont, of Halifax, suggested that there was much more that local authorities could do to provide information about the effects of atmospheric pollution. He said that in Halifax, side by side with the deposit gauges recording the highest and lowest deposits, apparatus was employed in order to give information with regard to the sunlight received at those points. A large amount of useful information had been gained in that way, showing that as compared with the less polluted station the other lost about 25 per cent. of sunlight during the year, the percentage loss being greater in winter than in summer.

The Conference were agreed that the subject of atmospheric pollution needed much greater public attention, and that the scientific investigation of it should receive the support of all local authorities.

THE GREATER LONDON HOUSING CAMPAIGN

XXII.—PROGRESS UP TO SEPTEMBER 30, 1934.

By JAMES P. ORR, C.S.I., C.B.E. (late Director of Housing to the L.C.C., 1919-21).

Part II.

London Compared with Birmingham, Liverpool and Manchester.

THE figures in Birmingham, Liverpool, and Manchester corresponding to the 14.1 subsidised dwellings per thousand of population built by the local authorities of Greater London up to September 30, 1934, are 40.9, 30.4 and 28.6 respectively. For every home provided by the 121 local authorities of London per thousand of population the northern cities have provided—Birmingham, nearly three; Liverpool, well over two; and Manchester, just over two homes per thousand.

In aggregate output of municipal and private enterprise together, the greater activity of private enterprise in London tells heavily in improving London's position relatively to the northern cities. Here London's average of 59.7 dwellings per thousand of population is gradually catching up the figure for Birmingham (now 60.7), and is well above the 55.7 of the whole country, about 45 per cent. above the 41.1 of Liverpool, and 40 per cent. above the 42.8 of Manchester.

In London only 24 per cent. of the post-war output of small dwellings has been contributed by municipal enterprise as against 74 per cent. in Liverpool, and 67 per cent. in Birmingham and Manchester. This means that the working classes get much more help from the housing subsidy in the North than in London; for houses built by private enterprise are rarely available for any but the higher-paid ranks of the working classes.

So far as the poorer classes are concerned, Birmingham have gone much farther ahead of London than a mere comparison of the number of municipal houses per thousand of population in the two cities indicates; for, under the personal rent-rebate system, which is worked without any difficulty in Birmingham, tenants who cannot afford the normal municipal rents are allowed rebates which now average 3s. 3d. per week, and bring their rent down to an average of 5s. 6d. per week, including rates, so that even very poor families can be rescued from bad housing.

Moreover, apart from the general quarterly revision of all rebates, individual tenants who fall out of work can thereupon get their rebates revised. At the end of September, some 29 per cent. of the 853 families rehoused under the 1930 Act were enjoying rebates; and the total cost of these rebates, which in special cases run up to as much as 8s. 3d., raised the average cost of the whole Greenwood scheme by less than 1s. per family rehoused. It would seem worth while to consider whether a similar rebate scheme might not with advantage be applied to a limited portion of the London municipal estates, e.g., say, to estates reserved for the poorer classes.

Cost of Construction.

Only nine of the 121 local authorities gave out any contract for 50 or more houses during the last half-year. There was the usual wide variation from place to place as regards the average constructional cost per family at which the local authorities do their rehousing. In cottage estates there was little variation. The cheapest contract was in Mitcham, where 70 cottages of 720 sq. ft. average floor area cost £300 each, the dearest in Croydon, 86 of 760 sq. ft. at £324; but in central London flats there was the same variation and between much the same limits as in the previous half-year, viz., from £365 to £487 for flats of about 580 sq. ft. floor area. This £365 works out to about 12s. 7d. per foot super. Its occurrence in both Islington and Stepney as against the £600 per flat which was normal a few years back, gives room for the hope that, with the aid of the personal rent-rebate system, municipal flats of three and four rooms may soon be provided for the poorer classes, even in central London, without recourse to the unsatisfactory device of drastically cutting the floor-area or imposing on the public purse such a heavy burden as the higher subsidy under the 1930 Act entails.

Subsidised Rents.

There seems to be an increasing tendency to moderation in municipal rents. The proportion of new dwellings let at 12s. 6d. or less per week, including rates, is no longer negligible. Among the largest batches of dwellings completed in the last half-year under the 1924 Act, the rents (including rates) of three-roomers are 10s. 6d. and 12s. in Woolwich, and 9s. 8d. in Croydon, where even the new four-roomers are let at about 11s. 6d. There is a striking difference between these rents and those of Wandsworth's final contribution to the Wheatley scheme, viz., 168 maisonettes let at 15s. 4d. for three-roomers and 18s. for four-roomers.

The high subsidy under the 1930 Act has widely divergent results in different places. In Edmonton the rents are 6s. 3d. for three-roomers and 6s. 9d. for four-roomers; and even in West Ham, where rates are over 19s. in the pound, three-roomers are let at 9s. 9d., and four-roomers at 11s. 4d.; but the Bermondsey Council, who have completed 902 Greenwood houses, i.e., 50 per cent. more than all the other Metropolitan Borough Councils together, still charge uniform rents of 13s. 6d. for three-roomers and 16s. 8d. for four-roomers. The subsidy under the 1930 Act was made specially high in order to bring rents down to within the rent-paying capacity of tenants removed from clearance areas; but if it is found that in a poor borough like Bermondsey so large a number as 902 families from clearance areas can be satisfactorily rehoused, without making the rents of even three-roomers lower than 13s. 6d., it becomes very difficult to justify the heavy burden put upon the taxpayer by the high subsidy, where it is used, as in the L.C.C.'s smaller Greenwood flats, to make rents 5s. lower than Bermondsey rents possible.

Where such high rents are collected from the poorer classes without difficulty, the explanation may be:

(*a*) that some families manage to pay rent regularly only by stinting themselves in other directions;

(*b*) that some really need three bedrooms, but manage with two by using the living-room also as a bedroom, in order to save rent; or

(*c*) that some tenants take in lodgers.

The writer has always felt and urged that rents should be reduced without increase of subsidy by adoption of the personal rent-rebate system, wherever this course is necessary in order to eliminate the practices noted under (*a*) (*b*) and (*c*).

That the L.C.C., at any rate, consider such reductions necessary in central London rehousing schemes is evidenced by the fact that last July they resolved to reduce the weekly rents in most of their large blocks of flats by amounts varying from 6d. to 3s. 6d. at a cost of £43,950 per annum; while their 557 three-roomers and 513 four-roomers completed in the last half-year include respectively 485 and 207 let at 12s. 6d. or less, the range for three-roomers being 7s. 4d. to 17s., and the range for four-roomers 9s. 5d. to 19s. 2d.

Present Position.

The position reached in the post-war housing campaign by September 30, 1934, is indicated, so far as the number of small dwellings provided by different agencies is concerned, by the following résumé of figures already given *plus* those of houses provided in discharge of rehousing obligations under Acts prior to 1930 (5,465, including 53 in the last half-year):—

	Dwellings provided.	In last 6 months.	In 15½ years.
i. with subsidy—			
(*a*) by local authorities	2,898		120,512
(*b*) by private builders	152		45,603
ii. without subsidy ...	30,112		324,708
Grand total... ...	33,162		490,823

It is noteworthy that, though the last six *months*' output exceeds the average *annual* output of 31,666, it falls short of the output of the previous six months (34,317). The upward trend of half-yearly production, which showed higher and higher figures from half-year to half-year for the last two years, has now ceased in Greater London, though it continues in the rest of the country.

The addition of 33,162 dwellings to the small-house-pool in the last six months cannot but have benefited the lower-middle and better-paid working classes, particularly in the suburbs; and, in the general shuffle resulting from the occupation of these new dwellings, some cheap dwellings hitherto occupied by better-to-do people will have become vacant and will be newly available for the poorer classes by virtue of the new provision in the Rent Restriction Act which prevents landlords from raising rents of low-rated dwellings to new tenants till 1938; but in central London this advance is heavily countered by another effect of the activity of private enterprise, viz., the impetus given to re-development and consequent demolition of vacated dwellings.

It is to the local authorities that the poorer classes must look for any large measure of early relief from bad housing conditions; and this is particularly the case in central London; but only 3,120 of the 33,162 new dwellings are municipal dwellings, and only 1,140 of these 3,120 are situated within London County. These 1,140 include 725 erected in place of old dwellings demolished in clearance and improvement schemes; so they represent a net addition of only 415 to the pool of small municipal dwellings in London County, i.e., 572 less than that of the previous half-year. The average half-yearly addition since the 1931 census is 727; and the aggregate for those 3½ years is only 5,086, probably not enough to counterbalance the reduction through demolition in the ordinary course of redevelopment in central London, and therefore quite ineffective as a means of abating the serious overcrowding, the increase of which in Metropolitan Boroughs was disclosed* by the 1931 census.

It is saddening to have to record that the London housing campaign is still as futile as a means of checking the spread and intensification of the more serious types of overcrowding among the poorer classes of central London as it was in 1921-31.

Prospect.

It must not be supposed that the apparent poverty of achievement in the last half-year in the way of net increase of housing accommodation for the poorer classes in central London indicates stagnation or anything like stagnation of effort.

Only those who are actively engaged in the work of rehousing particular families can realise how complicated that work is, and how heavily it is impeded in central London by the paucity of building sites and of vacant dwellings that can be made available for the poorer classes. The heavy spadework that is being done to overcome these difficulties does not lend itself to demonstration of progress by figures; but its effect has been to make the prospect of early relief from bad housing much brighter for the poorer classes at the end than at the beginning of the last half-year.

There has, unfortunately, been no sign of any action by local authorities towards adoption of the two measures—the scheduling of

* For details see two last reviews at page 237 of *The Builder* of August 10, 1934, and page 469 of *The Builder* of March 16, 1934.

urgent cases and the enforcement of by-laws for raising the standard of comfort in houses let in lodgings—which, as pointed out in the last review, could be adopted forthwith and would go so far towards improving that prospect; but His Majesty's Government have now made it clear that they recognise fully the need of as vigorous action towards abatement of overcrowding as they have insisted on in the slum-clearance campaign; and this, coupled with the L.C.C.'s announcement of their determination to add largely and rapidly to the pool of cheap municipal dwellings, has done more than anything else to improve the prospect for the ill-housed poorer classes.

The recently published Bill, by means of which His Majesty's Government propose to arm themselves and the local authorities for a direct attack on overcrowding, promises well; but detailed comments on it must be deferred to a later article.

THE ARCHITECTURAL ASSOCIATION

THE RECENT TREND IN METAL FINISHES.

A MEETING of the Architectural Association was held on Tuesday evening at 36, Bedford-square, W.C. The President, the Hon. Humphrey Pakington, F.R.I.B.A., who occupied the chair, announced a special general meeting to be held on Tuesday, February 26, for the alteration of by-laws.

An address followed by Dr. S. Wernick, Ph.D., etc., whose subject was "The Recent Trend in Metal Finishes for Architectural Purposes." The lecturer said that until very recent times metal finishing had been an art, and an undisciplined art at that; but within the last fifteen years or so scientific methods had rationalised that art, so that now most of the processes were rigidly controlled and the laboratory worked throughout in close co-operation with the shop. The art began when men commenced to work in metals, but modern methods of metal finishing had been developed over not much more than the past century. Bronzing had developed in France just prior to 1828, at which time only one colour of bronze had been known to the trade —Verde Antique. Florentine bronze appeared in 1828, to be followed by other methods, some of these being recognised even to-day as the finest finishes in the art. Electro-plating had commenced seventy odd years ago, the first metals to be electro-deposited on a commercial scale being silver, gold, nickel and copper. To these might be added to-day zinc, tin, brass, cadmium, platinum, palladium and rhodium.

The appearance of a metal finish might be metallic, similar to that of the superimposed metal, and with a varying degree of lustre according to whether that metal was polished, burnished, scratchbrushed or matted; or, alternatively, any combination of colours might be obtained by the use of paints, enamels, lacquers or other dyed finishes. It should be borne in mind that superficially it was not easy to distinguish between a good finish and a shoddy one—even the expert had difficulty if he was not allowed to submit the deposit to tests. Whatever the appearance of the finish, its serviceability would depend on a few basic properties. First of all, it should adhere tenaciously to the base metal. The best type of bond between the finish and the base metal was a chemical one, such as obtained with many types of electro-deposits, and in certain other cases such as galvanising, where an alloy phase existed between the base metal and the coating. It was possible to obtain nickel plating on steel so tenacious that in any attempt to part the deposit forcibly by applying very high tension, the base metal would part from itself rather than at the juncture of base metal and deposit. Such nickel plating represented the best type of work which could be carried out in plating shops to-day, when every step of the process was carefully controlled.

Mechanical Adhesion.

A form of adhesion only inferior to the chemical bond was of a mechanical nature. This occurred when the finish was interlocked between the interstices at the metal surface, and was the best form of adhesion one could obtain in the case, e.g., of an enamel finish. To obtain this form of adhesion, the surface of the base metal might be roughened by chemical etching, sand-blasting or other means. The degree of adhesion could not always be detected by mere inspection. A plating, particularly upon certain metals such as aluminium and zinc, might appear securely attached to the base metal when actually the true adhesion was poor; and in due course, particularly if the deposit was porous, the plating would peel away from the base metal.

Porosity of finish was an important factor in reducing its efficiency; because the protection afforded to the base metal from corroding conditions depended largely on the degree to which the finish insulated the article from those conditions; and these might comprise internal or external, rural, urban, marine or tropical atmospheres. A highly porous finish acted like a sieve, and under certain conditions might be worse than no finish at all, since it might result in an intensification of corrosion at the pores.

Other essential properties of a metal finish were uniformity over the surface to which it was applied, and an adequate thickness of the coating to ensure reasonable wear and tear in service. The quality last named was largely bound up with the hardness or abrasion resistance of the finish. Uniformity depended chiefly on the process employed, and spraying was probably the best method of ensuring it. Chromium plating in particular suffered from lack of uniformity, articles of complicated shape receiving little or no chromium within hollows or recessed portions. Nickel plating was better in this respect, while copper, zinc, cadmium and some other platings gave practically complete uniformity.

Protection of Iron.

Iron was the metal by far the most widely used in architecture because of its cheapness and the excellent structural properties of its alloys—i.e., the various steels available to-day. It suffered from the great disadvantage that it was readily corroded by the atmosphere, both its strength and its appearance deteriorating as a consequence. It was therefore necessary to protect it by a finishing process. For the purpose of preventing corrosion there were two main classes of coating processes, namely, the inorganic coatings, comprising metals and inorganic compounds, and the organic coatings, which included paints, enamels, varnishes and lacquers. For applying metallic coatings there were numerous methods now in use, although at one time there had been only one, viz., "hot dipping." For this, the article to be coated was immersed in a bath of molten metal, the metal chosen being necessarily common and of low melting point, such as zinc in galvanising and tin in tinning. Galvanising had been early recognised as a sound method of preventing corrosion, and was still practised much in the same way as in the early days of the industry. Its effectiveness as a corrosion preventive was due to the fact that the protection was not merely mechanical, but also electro-chemical in its nature.

The use of electro-deposited coatings had much increased in recent years. They were by far the purest: in the case of zinc and cadmium the coating consisted of practically one hundred per cent. pure metal. The deposit was "grown" at a uniform rate, so that an adequate thickness capable of providing efficient protection was much smaller than with other processes. The process had been developed of recent years until it could be worked entirely automatically.

Another method of applying a metallic coating was by vaporisation or cementation. This process enjoyed an increasing application and consisted essentially in heating the articles to be treated while surrounded by the coating metal—this was usually in powder form—to a temperature not far below its melting point. Vaporisation of the more fusible metal occurred, and this was deposited upon the surface of the other. Thus was formed a closely adhering coating consisting of the alloy of the two metals at the junction, so that the coating became an integral part of the surface treated. Of this process there were various applications. The best known was "Sherardising," which employed powdered zinc or a zinc-cadmium alloy. The articles to be treated were packed in a heated rotating drum. Aluminium powder was used in the same way in the "calorizing" process: in this case the resulting product was highly resistant to oxidation by heat, and was used for furnace bars, etc. The "chromizing" process produced a coating of chromium in a similar manner.

The most recently introduced process of all consisted in the direct spraying of the coating in the form of the molten metal on to the surface being treated. Practically all metals might be sprayed. Pure coatings could be applied, but owing to the high temperature used they were subject to oxidation.

Organic Coatings.

Coming to organic coatings, the lecturer said that only mechanical protection could, generally speaking, be provided by paints, enamels, varnishes, lacquers, etc. Hence such features as perfect adhesion, uniformity of coating, and freedom from imperfections were even more significant than with metal coats. More than half the corrosion failures in painted steel structures arose not through insufficient or inefficient paint, but through the inefficient preparation of the surface before painting. Sand-blasting might have to be resorted to in really obstinate cases of heavy scale to clean a surface efficiently, but once it was cleaned the nature of the primer which was first applied played a considerable part in the ultimate protection achieved by the paint. It must act as an efficient "key" for the next coat, be of a dehydrating character, and possess rust-inhibiting properties. Primers containing lead, zinc, iron and cadmium oxides were best. The lead pigments were well known, and were probably as efficient as any in use to-day. Where spraying was employed and red lead was considered undesirable, its place could be taken by iron oxide, which, though less effective, was nevertheless a definite inhibitor. The zinc pigments were better, and compared favourably with the lead variety; they combined readily with the other constituents of the primer, the resins and oils, and formed somewhat complex compounds, which were beneficial alike from the point of view of the cohesion of the primer and the protection it provided. Cadmium pigments had somewhat similar properties, and were efficient inhibitors. A disadvantage was their comparatively high cost. Recently aluminium paint had evoked considerable attention, not only as a primer but also as an undercoat and a finishing coat.

The finish on such a corrodible material as iron was of little value unless it was adequately protected; but non-ferrous metals were ordinarily not so readily corrodible, and, therefore, the protective aspect was not usually so highly important. For example, whereas a nickel deposit on steel should be specified to be at least one-thousandth of an inch thick, on brass or copper it need not be more than half that thickness. Chromium plating was a deservedly popular finish on brass articles. The user of chromium plating should specify an adequately thick undercoating of nickel if he wished to obtain maximum service; because poor chromium plating was as often as not due to the faulty coat of nickel underneath. The thickness of the chromium deposit itself was not of very great importance provided the nickel underneath was substantial; the nickel should contribute the effective bulwark and the chromium be the superficial decoration.

Mr. V. O. Rees, F.R.I.B.A., proposed, and Mr. G. E. Gardam, B.Sc., seconded, a vote of thanks to the lecturer, which was heartily accorded.

ARBITRATION IN BUILDING DISPUTES—IV

By W. T. CRESWELL, K.C.

A Dispute Must Precede Arbitration.

As has been already emphasised, before any reference to arbitration can be made there must exist some dispute on one or more of those matters comprised in the arbitration agreement; that is to say, one of the parties must have given his decision thereon and the other party (or parties) must have disagreed with him. Furthermore, if either party contends that the dispute which has arisen does not call for judicial inquiry, and the other party (or parties) does not agree and recourse is had to the Court—then, if the Court decides that there is no such need, there cannot be any reference.

Again, one of the parties may contend that the particular dispute which has arisen is not within the scope of the arbitration clause of the building contract; so much depends on the wording of the clause itself. And again, it may be necessary to have recourse to the Court for it to construe the arbitration clause.

If the architect, already the agent of one of the parties, is the sole arbitrator, the reference should be couched in very precise terms, as his position is in any case a delicate one; but where there is an independent arbitrator, it is usually better to leave a wide scope for his judicial considerations and decisions. (See Brodie *v.* Cardiff Corporation (1919), A.C. 337.) Also, the arbitration clause need not be so literally construed when there is an independent arbitrator, whose function is that of arriving at a decision in all respects equitable. If an arbitration clause clearly covers *all* disputes that may arise under the contract, then it will also empower an independent arbitrator to determine disputes as to the true meaning and effect of the terms of the contract, and even to determine disputes on questions of law. But this power does not oust the jurisdiction of the Court, to which either or both parties may apply regarding the decision of the arbitrator on a question of law. Also, in such circumstances the arbitrator has jurisdiction to decide finally on evidence before him if an alleged custom affecting obligations under the contract actually exists or not; but, if such custom is inconsistent with the express terms of the contract, these will prevail over the custom. (See Produce Brokers Co., Ltd., *v.* Olympia Oil and Cake Co., Ltd. (1916), 1 A.C. 314.)

By Arbitration Act, 1934, Sec. 9, an arbitrator may state a special case for the decision of the Court regarding a question of law arising during the proceedings or regarding the award or any portion of it, and if the Court, on application, directs the arbitrator to state such a special case, he is bound to do so, even if proceedings under the reference are still pending.

The Architect as Sole Arbitrator—Certifying.

When under the building contract the architect is constituted sole arbitrator, the duties and powers so laid upon and given him must not be confused with the duties and powers he already has in his main function of certifying and approving the work; and it is always possible that he may be called upon to act, in regard to the same matter, at one time in the capacity of arbitrator, and at another time in the capacity of certifier and approver of the work. His position is almost Gilbertian in his sincere endeavour to keep his several offices quite distinct in their respective activities.

An architect, when he is sole arbitrator and also certifier and approver of the work, is bound, before issuing his final certificate, to give as arbitrator a hearing to the parties to the building contract concerning any dispute which may be outstanding between them. (See Eaglesham *v.* McMaster (1920), 2 K.B. 169.)

The Architect in a Quasi-judicial Position.

The architect—even if he is not appointed arbitrator—who under the building contract is the person who has to decide between the employer and the contractor whether work or materials are in accordance with those specified or taken up in the contract, or to certify what is finally due to the contractor, occupies, in fact, a similar position to that of an arbitrator, since his duties are of a quasi-judicial nature. His final certificate cannot be challenged (except, of course, on a charge of fraud) if there is no arbitration clause or agreement. (See Goodyear *v.* Weymouth Corporation (1865), 35 L.J., C.P. 12.) If there is an arbitration clause, it is only by its operation that he can be challenged (see Robins *v.* Goddard (1905), 1 K.B. 294). And even then he is precluded by his quasi-judicial position from being held liable for lack of skill or knowledge of the law, or any negligence. (See Chambers *v.* Goldthorpe (1901), 1 K.B. 624.)

In such contracts it is not easy to determine when the architect is acting as quasi-arbitrator or merely as the employer's agent. If the decision of the architect which is questioned is that of an architect only, and relates to a matter concerning the quality or materials of the work, he is being questioned as to his actions as agent; but if the matter on which he has given a decision is one which the building contract excludes from arbitration, leaving it to the sole discretion of the architect, then he must give such a decision judicially and impartially between the parties, and he is a quasi-arbitrator. There can, of course, be no question as to his decisions when he is appointed sole arbitrator; his duties are then defined, and he is bound to preserve a judicial independence of mind, and to act fairly and impartially between the parties; to give a fair hearing to both parties and their witnesses. And under the Arbitration Acts he can be restrained from giving any decision if it can be shown that he is unfit or incompetent.

Difference between Arbitration and Valuation.

It should be clearly understood wherein lies the precise difference between an arbitration and a valuation. The distinction is made thus: If a judicial inquiry is intended by the parties to a dispute on which the matters in dispute are to be determined by the hearing, argument, or on the evidence of others, the tribunal is an arbitration; but if a question of value or appraisement only is referred to an independent person for his personal opinion on that point alone, and without hearing argument, or hearing the evidence of others, and to which he is to apply his own skill and knowledge so as to prevent a dispute arising, the result is a valuation. Further, whereas, under the Arbitration Acts, the award of an arbitrator can be remitted or set aside by the Court, the valuation of a valuer cannot be so set aside or remitted. A person who values or appraises "any estate or property, real or personal, or any interest or possession or reversion remainder, or contingency in any estate, real or personal, or any goods, merchandise, or effects of whatsoever kind or description for or in expectation of hire, gain, fee, or reward or valuable consideration to be therefor paid him," must be licensed. (See section 1, Revenue Act. 1845.) Furthermore, his appraisements or valuations must be properly stamped (see section 24, Stamp Act, 1891). Architects and surveyors who make such appraisements or valuations, even on one isolated occasion, must comply with these requirements. (See Palk *v.* Force (1848), 12 Q.B. 666.) If, however, such appraisements or valuations are made "for the *information* of one party only, and not being in any manner obligatory as between the parties," neither a licence nor a stamp is required. Of this last category would be approximate estimates which architects and surveyors are accustomed to prepare and put before their clients.

An appraisor or valuer is liable to his employers for a careless or unskilful valuation, though not to other persons whose interests may be affected thereby.

CONSTRUCTIONAL AND DECORATIVE TIMBERS

THE first of a series of six technical lectures of special interest to members of the architectural profession and of the industries concerned was delivered at the Building Centre, on Thursday, January 24, by Mr. E. H. B. Boulton, M.C., M.A., on the subject of "Some Constructional and Decorative Timbers."

Mr. E. Guy Dawber, A.R.A., F.R.I.B.A., who occupied the chair, in introducing the lecturer, said that Mr. Boulton was for some 13 years lecturer on Timber Utilisation at Cambridge, and had since become director of the Timber Development Association in London, a body inaugurated by the building industry to further the utilisation of timber.

Mr. Boulton's lecture is too long to permit of a useful summary, but many interesting points were raised in the discussion.

The Chairman said he was under the impression that quickly grown timber was always soft and that the slow grown timber was the hardest and best and most durable.

The lecturer replied that he said it should be rapid in those timbers which had large boles in the spring growth. In the case of soft woods the rate of growth should be slow.

The Chairman said he always understood that slow grown oak on hard soils was much more durable and much harder than that grown in softer soils, where it grew much more quickly.

The lecturer replied that in that case the rapid growth gave strength. In the case of oak, ash, elm, sweet chestnut and hickory the faster one grew them the harder they would be. That was not the case, however, with a timber such as beech.

The Chairman said that years ago he used a good deal of elm for flooring, and the builders had a special method of laying it. For the first year they tacked it down lightly, and it curled and twisted and made a noise when walked on, but in a year's time, when it was finally laid, it made a magnificent floor and the colour was beautiful. For doors and so on it must be given plenty of time to season. When the tree was cut it should be stacked in boards with strips of wood between to let the air in, and heavily weighted on top with stones or bricks to keep it all perfectly level, and if it was left like that for a year or 18 months under a light cover, it would season and stand very well indeed; but even then floor-boards would curl, and it was advisable with elm and also with oak to leave the floor for about a year before laying it down finally.

Many people still did not understand the fallacy of thinking that because they had timber which was of some age it would necessarily be suitable for any purpose. One heard people saying, "I have some lovely beams two hundred years old; we will saw them up for flooring or panelling; they must be very well seasoned." The result was exactly as if one had used a tree which was perfectly green, a new tree; one had removed the skin and opened up the pores, and got shrinking, warping and twisting exactly as if one had used a new tree.

Mr. Boulton had described a useful way of applying creosote to timber for fencing and so on. It was quite impossible, of course, to creosote the whole of the fencing; the part to preserve was the part which went in the ground just between wind and water. Mr. Boulton said there were two ways of doing that, one by impregnating it under pressure, and the other by simply dipping it. The speaker would like to know more about that,

because it was most interesting. They wanted to know how to prevent fencing from rotting away. They knew, of course, that all fencing should be kept clear of grass.

Mr. Boulton had referred to boarded houses. A great many of these were found in Kent and Sussex, and indeed all over England. He thought a great many of them were boarded because the old oak framing shrank so badly and the joints opened and let the water in, so that they boarded them, perhaps two hundred years ago, and they were now just as sound as when first put up. Personally, he thought there was nothing more charming than a boarded house, and it was warm in winter and cool in summer. The argument that it harboured vermin was quite ridiculous, because we could use different materials such as asbestos which prevent vermin from getting in.

A vote of thanks was carried by acclamation, and Mr. Boulton briefly responded.

Mr. L. H. Bucknell said Mr. Boulton had said a good deal about Oregon pine or Douglas fir. It might be a magnificent timber in all sorts of ways, but a word of warning was necessary: "Do not try to paint on Oregon pine if you want a perfectly smooth paint finish. The grain is unsuitable. If the builder says, 'Do you mind if I use Oregon instead of deal?' the answer is, 'Yes, if you are going to paint it.'" The speaker concluded by proposing a hearty vote of thanks to Mr. Dawber for taking the chair, and this was carried by acclamation.

TIMBER DEVELOPMENT ASSOCIATION EXHIBITION.

An exhibition of English and Empire timber is now being held at the Building Centre. The purpose of the exhibition is to show samples of the various grades of timber offered—the first quality and the inferior qualities. Thus, a person ordering first quality timber would get selected timber, free from all imperfections, and, if ordering a second or third quality, he is able to see what would be supplied. The lesser grades are sound and serviceable for less important work, constructional or unexposed. A large number of attractive specimens are on exhibition, showing figuring and graining, suggesting what purpose they might be used for, such as construction, panelling, furniture, etc. The specimens of veneer are attractive in their unpolished state. The exhibition remains open up to February 8.

SOCIETIES AND INSTITUTIONS

THE COLLEGE OF ESTATE MANAGEMENT.

"Interim Development Applications."

Lecturing at the College of Estate Management, 35, Lincoln's Inn Fields, W.C.2, on January 22, Mr. Theo. Sophian, barrister-at-law, outlined the stages in the procedure in connection with planning schemes under the Town and Country Planning Act, 1932, and stressed the importance of interim development applications. Interim development meant development at any stage between the date on which a planning resolution took effect and the date when the scheme finally came into operation; that was, when it had passed through all the stages, the Parliamentary and litigation stage included. Owners would be unwise to develop property without making the necessary application to the interim development authority. If a scheme contained provisions which an owner's building or property was likely to infringe when the scheme became effective, and an owner happened to build or use his property in contravention of those provisions, he would have to cease to do so, without any compensation. If an owner failed to make an interim development application he might, when a scheme came into operation, have to pull down his property or cease using it for the purpose for which it had been used. Thus the importance of an interim development application.

There were certain new features in the laws as to interim development under the new Act. Development, for the purposes of the Act, was confined not only to ordinary development, but extended to user. The giving of decisions with regard to interim development by the interim development authorities had been speeded up, and the general time limit in which an authority must give a decision was now two months. Authorities might now contribute to any loss or damage which an applicant suffered by reason of any adverse interim development decision. There was also now the right to purchase land when it was to be preserved for public open spaces, and the owner had the right to recover compensation for any abortive expenditure incurred in complying with the conditions imposed by the interim development decision.

In considering the question of application in connection with interim development, it was well to divide it into three categories: development for which no permission from the interim development authority was required; development in respect of which an application to the interim development authority must be made, though the authority must unconditionally grant the application; and development in respect of which an application must be made and also must be granted though it might be granted only subject to conditions. The usual course was to make an application to the interim development authority, accompanied by site plan and particulars. If one submitted plans for interim development to an authority who was merely the authority to whom, ordinarily, plans for building and streets had to be submitted, then that authority must give the applicant notice that it was not also the interim development authority.

THE INSTITUTE OF BUILDERS

We conclude from our last issue the names of those successful in the Institute examinations.

Higher Certificate Awards, 1934.

Acton Technical College.
C. F. Blake.
*E. W. Britton.
C. R. Fennell.
E. J. Nichols.
W. W. White.

Barnsley Technical College.
A. H. Clark.
E. Cutts.

Birmingham Central Technical College.
M. F. Faulding.
A. W. C. Hodgskin.
H. J. Robinson.

Supplementary Endorsement
D. E. Teall.

Blackburn Municipal Technical College.
A. Greenhalgh.
J. Holden.
T. R. Moyle.
H. Naylor.
*A. Parkinson.
R. Wilkinson.

Supplementary Endorsement.
W. Clegg.
F. Entwistle.

Bolton Municipal Technical College.
S. Menaul.

Bradford Technical College.
J. V. Webster.

Bristol. Merchant Venturers' Technical College.
H. H. Calway.
H. H. Evans.
J. Fisher.
L. W. J. Hurley.
E. W. Nicholas.
E. H. C. Poole.

Cardiff Technical College.
L. J. Cox.

Coventry Municipal Technical College.
D. C. Daly.
K. J. Evetts.
*N. Tovey.

Derby Technical College.
C. C. Daniells.
*H. M. Eggleston.
*O. W. Eley.
J. F. Horobin.

Halifax Municipal Technical College.
A. Crawshaw.

Huddersfield Technical College.
W. Bedford.
*J. Bolland.
F. Butterworth.
F. Gledhill.
G. Thompson.

Hull. Kingston-upon-Hull Municipal Technical College.
K. T. Clubley.
C. M. Kaye.
R. W. Lawtey.
E. Mulich.
A. H. Turner.
*T. Wilson.

Leeds College of Technology.
F. Campey.
N. T. Fallon.
*C. Moore.
*A. A. Oxtoby.
*R. Parry.

Liverpool Central Municipal Technical School.
S. R. Bowes.
J. S. Broster.
J. Christie.
W. J. Craine.
S. E. Cross.
E. Elder.
J. H. Gaskell.
R. F. Gibbons.
L. J. Grice.
J. E. Harrison.
T. Howard.
A. J. Jamieson.
F. W. Johnson.
C. T. Martland.
E. Smitton.
W. G. Staines.
*W. H. Thomason.
J. Tomlin.
G. B. Worthington.

Supplementary Endorsement,
T. H. Adams.
O. L. Hughes.
J. P. Parker.
F. Williams.

* Distinction.

London.
Brixton—L.C.C. School of Building.
G. W. Burridge.
J. F. Gray.
G. E. Osborne.
R. N. Pink.
D. C. M. Radford.
A. C. Shearer.
W. S. Taylor.
H. C. Tessier.
R. J. Wheatland.
E. E. F. Willmore.

The Polytechnic Institute, St. Marylebone.
R. Catton.
*R. H. McEwan.
*J. Morgan.
B. V. N. Rawlings.

Woolwich Polytechnic Institute.
J. F. Middlewick.
E. R. Osborn.
W. F. Parish.
P. G. Taylor.
F. A. E. Trowbridge.

Supplementary Endorsement.
W. B. Anderson.
L. J. Huggett.
W. J. Probert.

Maidstone Municipal Technical Evening Institute.
R. Head.
T. Ivell.
E. A. Russell.

Manchester Municipal College of Technology.
*D. H. Brew.
J. W. Clough.
W. Crook.
W. E. Kirkham.
M. E. Martin (Miss).
H. Westbrook.

Medway Technical College.
A. G. Davenport.
C. H. Ironmonger.

Newcastle-upon-Tyne. Rutherford Technical College.
*R. W. Armstrong.
R. Brown.
J. C. Johnson.
R. Jordan.
W. R. McKay.
J. Taylor.
G. W. T. Punshon.
E. Shorter.

Supplementary Endorsement.
W. Herron.
W. B. Metcalf.
F. Osborne.

Norwich Technical College.
*G. C. Haydon
W. G. Read.

Plymouth and Devonport Municipal Technical College.
A. L. Beer.
C. R. Cureton.

Preston. The Harris Institute.
G. Brown.
*C. N. Byrom.
F. Gornall.
*H. A. Kay.
H. Parnaby.
J. T. Simpson.
F. Wignall.

St. Helens Municipal Technical School.
*W. S. Almond.
R. Ashcroft.
R. N. Davies.
A. Latham.
F. Orrell.
E. Pennington.
W. J. Smith.
A. Standish.
D. B. Wilkinson.

Salford Royal Technical College.
*F. Ablett.
F. G. Brown.
J. H. Buckley.
*J. Conahan.
*G. A. Davis.
A. Royle.
J. Tabbron.
E. Wynn.

Sheffield. University of Sheffield—Department of Applied Science.
*A. E. Dodson.
H. L. Sampson.

Stockport College for Further Education.
N. G. Ashton.
G. H. Bardsley.
R. Fowler.
A. Goddard.
E. K. Poole.
T. Shuttleworth.
W. H. Sutton.

Sunderland Technical College.
W. Chapman.
T. K. Davison.
*H. Graham.
W. Henderson.
A. Hornsby.
L. Lambert.
H. Thompson.
A. R. Turnbull.

Supplementary Endorsement.
A. L. Kerrison.

Widnes Municipal Technical College.
F. Davies.
W. Tomlinson.
W. Towers.

Wigan and District Mining and Technical College.
P. Cooke.
E. R. Crane.
E. H. Paisley.
S. Smith.
K. F. Weakley.

Ordinary Diploma Awards, 1934.

London.
Brixton—L.C.C. School of Building.
S. S. Burr.
D. L. Courtney.
L. J. Crawford.
R. A. Crumbleholme.
N. E. Hough.
G. Mould.
D. A. Porter.
H. E. D. Willmott.

The Polytechnic Institute, St. Marylebone.
R. Abrahams.
T. C. Collins.
P. J. Dale.
T. J. Perkins.
J. C. Roll.

Salford Royal Technical College.
A. Bailey.
R. Hurdley.
J. Gleave.

Higher Diploma Awards, 1934.

London.
Brixton—L.C.C. School of Building.
D. Cameron.
J. A. Lecky.
*I. D. Thow.

The Polytechnic Institute, St. Marylebone.
B. S. Austin.
B. H. Johnson.

* Distinction.

THE WELSH SCHOOL OF ARCHITECTURE.

At a meeting of the staff and students of the Welsh School of Architecture, Cardiff, a presentation was made to Mr. A. MacLean, B.A., A.R.I.B.A., who is leaving the school in order to take up an appointment in the Glasgow School of Architecture.

Mr. W. Purchon, the head of the School, after explaining the unavoidable absence of Principal Charles Coles, paid a tribute to the work of Mr. MacLean, and on behalf of the school wished him the best of good fortune in his new work. Mr. D. H. Lewis—a senior student—then made the presentation, which took the form of a tea service and a pair of book-ends, on behalf of the staff and students. Mr. MacLean responded appropriately.

INQUIRY BUREAU

QUESTIONS.

Fireproof Roof to Garage.

SIR,—Can you give me any information on how to provide a fireproof floor, other than in concrete, over the top of a garage? It is intended to build a bedroom on top of the garage roof (now covered with asbestos tiles) and I am wondering if these tiles put aside for re-use will be suitable to cover the proposed bedroom roof over the garage, forming a flat roof laid to a slight fall to carry the water off, and finished all round the edge at the top with a brick coping. Will the rain water drive under the slates, which are 2 ft. long by 18 in. wide, if laid flat?

F. C. B.

Overhanging Tree: Liability.

SIR,—I have in the garden of a house just taken an oak tree which overhangs the garden of the tenant next door. My neighbour has recently sown his land with grass seed, and complains that the dripping from the overhanging branches causes pools in his land which affect adversely his young grass. What is the legal position? I am not anxious to lop the branches as they spring from the largest bough. ARB.

Labour Charges in Decoration.

SIR,—Would you kindly tell me how much I should pay for labour only for the following job by qualified decorator:—Paper walls of small square room—takes five pieces—and paper ceiling with lining paper (two rolls only). The walls and ceiling were already stripped and ready for the work. (The district is North London.) R. S.

[If our correspondent did not get an estimate, he will have to pay what this man is charging. He probably knows how long he was in the house. The paper is worth from 1s. 6d. to 2s. a piece to hang if paste, etc., is provided—say, 14s., plus 25 per cent. profit, say, 17s. 6d. A small decorator might want 33⅓ per cent. profit, which would be 18s. 9d. —ED.]

ANSWERS.

Moss on Brickwork.

[ANSWER TO "L. F. J.," JANUARY 11.]

SIR,—Moss can do no harm to brickwork, but it is evidence of the presence of dampness which, under the influence of frost can do extensive surface damage. The causes leading to the dampness need to be removed, and, in the case in point, it would appear that these causes will be automatically removed by the proper completion of the building. I am assuming that the wall is to be either properly coped or covered with the roof eaves and that there is no future source of entry for water from the top. When this is done it would be desirable to remove the moss by scraping the surface to assist the work to dry out properly. COPING.

Glass as Flooring Material.

[ANSWERS TO "G. M. S.," JANUARY 4.]

SIR,—This material has been used for many years in the form of pavement lights, and in this form the objections to the material are largely overcome by treatment of the framework. Chief of these is the slippery nature of the material, which is not serious when divided into small squares interposed with a non-slip material, such as carborundum or serrated metalwork. The other objection is its liability to breakage. This, again, is obviated by the use of thick glass in small units. Probably the best use of this material is arrived at by the use of concrete pavement lights with glass inserts. PAVEMENT LIGHT.

SIR,—Specially prepared glass is suitable for a flooring material when subject only to light weights. Owing to the fragile nature of any glass and its tendency to splinter, it is unsuitable where the traffic will be heavy or where articles having sharp corners will be set down edgeways on it. Its advantages are that it can easily be kept clean; it is resistant to acids and alkali, and is therefore of considerable use in laboratories, chemical storerooms, etc. Glass for this purpose must be of suitable manufacture, of a sufficient thickness, and be well supported on a suitable cushion underneath on which it lies perfectly flat. W. E. W.

Damp Wall Trouble in House.

[ANSWERS TO "C. E.," JANUARY 11.]

SIR,—If the wall is damp in patches there is no remedy in cutting out and re-plastering. The only remedy is to take off the whole of plastering down to floor, taking the skirting off. The joints should then be cleaned out to a depth of ¼ in. The brickwork should then be well damped and rendered with good sharp sand and English Portland cement, two parts of sand and one of cement, ⅜ in. thick, and then left for 24 hours. It can then be set. There are several sorts of finishing material that can be papered or distempered within a few days. PLASTERER.

SIR,—It seems probable that the wall has never been properly dried out. Heating the rooms by fires might provide a remedy. It seems likely that the parts of the wall which show damp are more porous and retentive of moisture than the remainder. If this were the case, could damp strike through the wall it might show in spots, part of the wall being unaffected. It seems most likely that the damp may originate from the damp atmosphere in the room, in which case vigorous natural or artificial ventilation would provide a remedy. The walls should be stripped of any decorations, then thoroughly dried out (preferably in the summer), then some damp-resistant decoration should be applied to the walls. This would prevent any damp from the atmosphere penetrating the walls themselves. W. E. W.

Warping of Jarrah Blocks.

[ANSWER TO "PAVINGS," JANUARY 25.]

SIR,—Your correspondent should refer to the makers and require them to remedy the defects, since the goods supplied are obviously not of the condition reasonably to be expected of a wood block flooring. I am assuming that the floor has had fair treatment and has not been treated with an excess of water. Incidentally, the best way to keep a wood block floor in condition is to clean only with a dry scrubber. BLOCKS.

Treating Timber to Stand Steam.

[ANSWER TO "JOINER," JANUARY 25.]

SIR,—Your correspondent does not describe the purpose for which the apparatus is being constructed, and it may be that the insulating of the inside with asbestos or other insulating material may defeat the object of the apparatus. Further information might make it possible to give helpful advice in this matter.

INSULATING.

Supply of Water on Job.

[ANSWER TO "CONTRACTOR," JANUARY 25.]

SIR,—The action of the Metropolitan Water Board is no doubt within their by-laws but seems to be a very arbitrary action. Your correspondent should make a personal call of protest and generally make a nuisance of himself. If he does this thoroughly he is likely to get attention in the usual way.

BUILDER.

Fireproofing Thatch.

[ANSWER TO "W. B. H.," JANUARY 18.]

SIR,—Thatching material may be fireproofed by treating with the following solution: 20 parts potassium carbonate, 8 parts ammonium borate, and 100 parts water. Heat will cause this to become a glassy mass, thus retarding the burning. Under heat it will also give off carbonic acid, which will smother the flames. W. E. W.

NEW CINEMAS

ABERDEEN.—A scheme is on foot to rebuild La Scala cinema, Union-street, to seat 2,800. The architect is Mr. T. Scott Sutherland, F.R.I.B.A., 10, Albyn-place, Aberdeen, but no detailed plans have yet been prepared as the scheme is at a very early stage.

BEXHILL.—Messrs. Henry Ward, Son and Wray, architects, 8, Bank-buildings, Hastings, have submitted plans to the Bexhill Corporation on behalf of Cinema Playhouses, Ltd., for the conversion to a cinema of York Hall. The scheme has been approved.

BOREHAM WOOD.—Barnet R.D.C. has approved two proposals for the erection of cinemas. One is to be built at the corner of Shenley-road and Cardinal-avenue, with which Mr. T. Hughes, surveyor, Station-parade, Boreham Wood, is connected; and the other also in Shenley-road, opposite Elstree-way, by the Tudor Cinemas (Elstree), Ltd. The architects for the latter are Messrs. Aubrey Paine and Sons, L.R.I.B.A., Station-approach, Elstree.

CROYDON. — Mr. E. S. Roberts, L.R.I.B.A., Lombard House, Great Charles-street, Birmingham, has submitted to Croydon Corporation plans for rebuilding the "Regent" Cinema, Portland- and Farley-roads. The plans were disapproved, but will, it is understood, be re-submitted.

DUBLIN.—A large theatre, equipped for cinematograph displays, is to be built on the site of the old Theatre Royal, for the Dublin Theatre Co. The accomodation will include—parterre, 1,954 seats; circle, 476 seats, and the balcony 1,194 seats. There will also be a lounge, bars, etc. The contractors are Messrs. McLaughlin and Harvey, Ltd., Dartmouth-road, Lesson-park, Dublin. The architects are Messrs. Leslie C. Norton and Michael Scott, 45, Albemarle-street, W.1.

ERITH, KENT. — Mr. Robert Cromie, F.R.I.B.A., 35, Baker-street, W.1, is preparing plans for the reconstruction of the "Oxford" Cinema for Sidney Bacon's Pictures, Ltd., 108, Great Russell-street, W.C.1.

HUNTLY.—Plans are to be prepared for a new super-cinema which is to be erected at Huntly, Aberdeenshire. Mr. T. Scott Sutherland, 10, Albyn-place, Aberdeen, and 9, The Square, Huntly, is the architect.

LINCOLN.—A £60,000 scheme for the erection of a super cinema in Lincoln, capable of seating 2,000 people, is under contemplation by a London company.

NEWARK-ON-TRENT.—A private company, with which Mr. C. J. Donada, 2, Devonshire-street, W.1, and Mr. R. G. Tarran, builder, Ryde-avenue, Hull, are associated as directors, has been formed to erect a 1,500-seater cinema in Middle-gate, Stedman-street, and Castle-gate. A café, shops and offices are included in the scheme.

ROMFORD. — The contract for the "Havana" Cinema, in South-street, Romford, for the New Victory Cinema (Romford), Ltd., has been placed with Messrs. W. F. Blay, of London and Dartford, and the steel work contract has been entrusted to Messrs. Sanders and Forster, Ltd., of Barking. The architects are Messrs. Leslie H. Kemp and Tasker, A.R.I.B.A., 10, Great James-street, Bedford-row, W.C.1, in conjunction with Mr. W. Evans, F.R.I.B.A., South-street, Romford.

SALFORD.—Messrs. Drury and Gomersall, Oxford-road, Manchester, are preparing plans for the enlargement of the Langworthy Picturedrome, Langworthy-road, for Langworthy Picturedrome Co. A balcony is to be put in.

STRETFORD.—Mr. Henry Elder, A.F.A.S. (Messrs. Roberts and Wood, FF.A.S.), 26, King-street, Manchester, has prepared plans for the erection of the "Longford" Cinema, Edge-lane and Chester-street. The cinema is to seat 2,000, and a café is included in the scheme, which is for Messrs. Jackson and Newport (Lancashire), Ltd.

WHITEFIELD.—Esson Cinema, Ltd., has been formed to erect a cinema on a site adjoining the "Palace," Whitefield, near Manchester. The cinema, the "Mayfair," will seat 1,500 persons, and will cost £22,000. Plans are in course of preparation by Mr. Alister G. MacDonald, A.R.I.B.A., 13, Queen Anne's-gate, S.W.1.

THE BUILDING TRADE

HOUSE DRAINAGE AND SANITARY PLUMBING—V

By J. R. TAYLOR.

METALS.

SANITARY inspectors, builders, plumbers, and others brought into frequent contact with drainage and plumbing systems in need of repair, are well aware that many grave defects are traceable to long-continued neglect. They also know that much of the repair work carried out is botched, even when property on which it is performed is of fairly good class. In many cases a defect that does not cause great inconvenience to the occupants will be put up with for a long time, though the need for repair is obvious. A slight leak at a sink waste, for instance, may be endured if a bucket can be placed so as to catch the small amount of water escaping, and be periodically emptied. A leak from the brass cap on a bath waste trap may destroy the water seal, but if the escaping water falls into a lead tray, the need for repair may for a long time go unsuspected. In some cases a stench has to be unendurable before action is taken. A dead rat under a wooden floor does as a rule receive delayed attention, but dry-rot causes a very unpleasant smell which is often endured until the floor boards give way. It is reflections of this sort that arouse anxiety in relation to the more remote causes of corrosion in metals, such as galvanic current between differing metals in contact. An escape of gas from installations on the one-pipe system will not always receive that prompt attention which is necessary for safety.

Corrosion of Non-ferrous Metals

In respect to this matter the writer is much indebted to the late Professor George C. Whipple, who, on behalf of the American (U.S.A.) Government, drew up a report of great value and lucidity. The principal non-ferrous metals used by the U.S.A. Government in plumbing systems are lead, zinc, tin and copper, and they are obtainable commercially in a fairly pure state. Generally, pure metals resist corrosion better than mixed or alloyed metals, or metals in contact with each other. Air and/or water usually contain acids or gases capable of causing corrosion in all these metals, but in some cases the result is that a surface coating is formed that resists further attack and gives protection to the metal below. A familiar example of this is the beautiful green patina that forms on a copper dome, which is really a form of rust, but which preserves the copper from further attack unless the air contains considerable quantities of carbonic acid and/or sulphurous or sulphuric acid. Ammonia will, however, dissolve copper oxide and expose the metal to further oxygen attack and continued corrosion, and this is the cause of the ultimate failure of copper sparge pipes used in urinals. Ammonia is a very destructive agent, and its presence in considerable quantity is usually a sufficient reason for preferring glazed stoneware to metal in urinal traps.

Lead pipes are attacked by soft waters which cause the formation of lead carbonate, which is quite soluble, and is consequently washed off leaving the metal bare for renewed attack. Lead is poisonous, and consequently some water companies insist on the interior of lead piping carrying domestic supplies being tin-washed during manufacture. But when the pipes are jointed up in assembling, the continuity of the tin is not usually secured, but the area of exposed lead is so very small that the danger of lead poisoning is negligible. A point of attack is, however, provided which is one of the reasons for preferring wiped lead joints. The water companies do not as a rule concern themselves with pipes carrying away waste waters which may contain substances capable of setting up a violent attack. There may be present in water in its clean state many substances capable of attacking metals, and others tending to preserve them from further attack; and when it is recalled that we now freely use all sorts of chemicals for cleansing, as preservatives, as medical stores, and in connection with our hobbies, it will be realised that an already complex subject becomes more difficult.

Metals in Contact.

Among authorities there are in many cases differences of opinion in regard to what does precisely take place in the process of metal corrosion, but it is commonly held that electrolytic action plays a large part. If rods of different metals are placed in water made slightly acid by the addition of carbon dioxide, and are connected up by means of a piece of wire with a galvanometer in the circuit, the passage of electricity from one to the other will be noted. If the first rod be iron and be connected up in turn with tin, zinc and lead, it will also be noted that the current does not in every case flow in the same direction. The current will pass from the iron to the tin or the lead rods but from the zinc rod to the iron. The passage of the current from the iron hastens the corrosion of the iron; but the passage of the current from the zinc to the iron dissolves the zinc and protects the iron. Zinc protects iron; iron protects lead and tin; tin protects copper at but little loss to itself, because the resulting salts of tin are relatively insoluble. Brass is an alloy of copper and zinc, and the higher the proportion of zinc the more rapid its corrosion.

In Professor Whipple's report reference is repeatedly made to hydrogen ions written H+. Hydrogen is a constituent of water represented by H, meaning an atom of hydrogen. The small plus sign added in H+ means that the atom carries a small positive charge of electricity. OH − represents another atom carrying a charge of negative electricity, and is referred to as the hydroxyl ion, and when the two ions join together the positive and negative charges cancel out, and the result is a molecule of water electrically inert. But not even in twice distilled water do all these ions unite; some remain in the water as free ions in such a state of motion that they exert a pressure similar in manner to gas pressure. We need not here follow the professor through the interesting but highly technical thesis concerning the activities of these ions, it being sufficient to say that the hydrogen ions which may be introduced into the water, are those which so aggressively attack metals. As the professor puts it: "The hydrogen ion and the dissolved oxygen are co-partners in crime. The hydrogen ion is the thief, the oxygen is the receiver of stolen goods. It is not far from the truth to say that the hydrogen ion causes the corrosion, the oxygen causes the rusting."

If strips of copper and zinc are put together in slightly acid water—water containing hydrogen ions—the hydrogen ions will "plate out" on the copper, and zinc will be eaten away, the hydroxyl ion acting chemically on the zinc, forming zinc hydrate. Metals can be classified and arranged in a series, and it will be found that under similar circumstances that which is higher in the series will be corroded instead of the other. As regards metals used in plumbing systems, such a series would read from the top as zinc, iron, nickel, tin, lead, copper. If any two of these make contact in slightly acid water it is that which is the higher in the scale which will be corroded. To use an illustration from practice, it is better to use copper than iron nails for securing lead, because copper and lead are much closer together in the series than are iron and lead, and iron being higher in the scale would be corroded. If iron dowels, bolts or cramps are leaded into stone, and water made slightly acid by contact with impurities in the air reaches unprotected surfaces of both metals, the iron may rust to such a degree that the expansion will fracture the stone. Coping stones holding iron railings are very frequently thus damaged. On the other hand, this galvanic interplay may be made to serve a useful purpose, and at one time a piece of zinc was put into iron boilers to prevent corrosion.

Metal in water containing hydrogen ions will corrode more rapidly if it is in contact with a metal lower in the series than if it be present alone. This to some extent accounts for the rapid corrosion that takes place in iron flushing tanks when used in some districts. It is, however, to be noted that the water must make contact with both metals, for a galvanised iron pipe would be very efficiently protected could the continuity of the zinc coating be secured and maintained. In practice it seldom is either secured or maintained, for the pipes are frequently cut and re-threaded for assembling, and young plumbers are frequently told to rime out pipe ends in order to be sure that they are freed of any slightly ragged edges that might otherwise reduce the bore. Pipe joints formed of different metals tend to set up local corrosion, and consequently brass piping tends to give out at the joints. A brass tap may hasten the corrosion of an iron pipe which may extend to a considerable distance along the pipe. It is consequently better to couple up piping with joints of the same material as the pipes than to combine differing metals.

Position of Soil-pipe.

The freezing-up of a soil-pipe carrying the whole of the discharge from branch wastes would be a very serious matter. But even when the soil-pipe is placed on the external face of a wall it would be an unlikely happening were it not that many occupants will not keep their taps in a good state of repair. In very cold, frosty weather many people turn taps slightly on with the idea of keeping the water in motion and thus reducing the likelihood of the pipes being frozen up. But as the result of this, or by reason of dripping taps in need of rewashering, it is in winters of but ordinary severity a very common occurrence to find waste pipes frozen up, and sometimes when taps are in good order and are left closed the water in the trap freezes. It is, however, noted that when the water in a closet trap freezes, the ice usually forms in the arm of the trap receiving the fitting before the water in the other arm, which is probably due to the presence of warmer air ascending from the drain. On occasion the whole of the water in the closet trap has been found to be frozen up solid, but in only one case in the writer's experience could the fracture of the fitting be definitely attributed to this cause. A small continuous leak from a defective flushing cistern has, however, been known to cause a soil-pipe to be blocked with ice during a frost of exceptional severity. On the one-pipe system there also seems to be some possibility of the open end at the top of the stack, as the combined result of condensation and snow, becoming, on rare occasions, choked, and this might have serious results as regards trap seals. On the whole, it would consequently seem to be desirable to carry up the soil-pipe within the building and this, in turn, points to the advisability of forming a special plumbing shaft in a suitable position. In such a shaft a warm current of air could be set up by passing a hot-water pipe through some portion of it. But cased-in pipes have certain disadvantages in that it is difficult definitely and permanently to exclude dust, and the casings provide harbourage for flies and other insects. The more this problem is studied the clearer it becomes that at many points it presents us with a choice between evils. We have, however, reached a stage where we can make one definite recommendation, and that is that where in a small house the cost can be faced, the soil-pipe and all its

branches should be constructed of the same metal throughout.

Access Points.

As has already been noted, the testing of a one-pipe installation with fittings on more than one floor presents certain difficulties, to overcome which it is necessary to provide points of access to the interior of the pipes to permit of expanding plugs of a smaller size than are now commonly used being introduced. It has frequently been stated that the access cap on a waste pipe trap should be placed below the water level, as a precaution against unseen leakages remaining undetected. But vertical portions of the piping will also require to have access points, and in particular it will be necessary to have assurance that ventilating or anti-syphonage pipes have not become clogged with grease. They should be of better design and sturdier construction than many that are at present used.

(To be continued.)

NATIONAL FEDERATED BUILDERS ANNUAL DINNER

THE annual dinner of the National Federation of Building Trades Employers was held on Wednesday night at the Dorchester Hotel, W., with the President, Mr. W. E. Collier, J.P., in the chair. The guests of honour were Lord Balfour of Burleigh and Sir Giles Gilbert Scott, while those present included: Major A. H. Killick, Lt.-Col. R. J. Cox, Sir Ian MacAlister, Sir Arnold Thornely, Sir Jonah Walker-Smith, Messrs. B. C. Aldous, A. J. Arnold, T. Barron, W. Bosworth, E. J. Bryant, H. B. Bryant, G. W. Buchanan, A. Cannon, A. B. H. Colls, R. Coppock, George Elvins, W. H. Forsdike, A. Francis, L. A. Gerrard, P. F. Gleed, M. J. Gleeson, G. S. Harding, E. C. Harris, Oswald Healing, T. Howarth, I. Ernest Jones, James Longden, C. P. Lovell, H. Marryatt, G. H. Parker, S. P. Purkiss-Ginn, E. J. Rimmer, Howard Robertson, J. H. Rooff, W. J. Rudderham, Leslie Shingleton, J. W. Smethurst, C. D. Spragg, F. W. Stratton, Sydney Tatchell, J. M. Theobald, Fred. Thorne, R. H. Tribe, Norman H. Walls, C. F. Ward and Charles Woodward.

The loyal toast honoured, Lord Balfour of Burleigh proposed the toast of the Federation. He had, he said, been studying the 57th annual report, and he was glad to note that the end of the year was, from the business point of view, not unfavourable. The evidence was that there was a return of prosperity not to the building trade alone, but to trade in general. As a proof it appeared that while there were in 1932, 549,000 operatives employed, 1933 saw 626,000, and 1934 696,000 in work. That indicated the measure of the return of trade and prosperity. As for unemployment, that had decreased from 152,000 in July, 1933, to 135,000 in July, 1934. What gave him pleasure was the Federation's interpretation of unity—a definition which included the welfare of all sides, operatives as well as masters. That was the only way in which lasting prosperity could be achieved. One might liken national prosperity to a pudding: the more co-operation the larger the pudding and the greater and the more shares to be got out of it.

The Housing Problem.

He, personally, said his lordship, was interested in the housing of the working classes. He was delighted to find that the Federation had set up a committee to consider the formation of a national standard. Some builders considered that by doing cheap work they could make an opportunity to secure an easy profit, but it would be a splendid thing if it were able to be said that a house was built to a national specification. Another point which was of importance was the need for the standardisation of by-laws. If one could eliminate the fact that one found different local authorities with different interpretations, it would be a great advance. The fact also that builders' business was largely seasonal was bad. If it were possible to stimulate building when other trades were bad it would be a splendid thing for the economy of the country. The fact that the National Federation had the matter in hand was all to the good.

The rôle of private enterprise in the housing of the working classes was an important one. He wished to begin by paying tribute to private enterprise which, in the years 1920 to 1934 had erected 1,695,000 out of the 2,484,848 houses built. But there were some fields into which private enterprise was unable to enter, one being the management of working-class property over a term of years. The problem to-day was not concerned with houses to sell but houses to let, for the problem of labour generally was fluidity of habitation, which meant in essence houses to let. It was necessary to have those houses at rents from 7s. to 11s. inclusive of rates, which could only mean a return of from $2\frac{3}{4}$ to 3 per cent. Money at present which was satisfied with that return would go into gilt-edged. We had got to recognise that the field for private enterprise would be limited to construction; the question of ownership lay elsewhere. The Minister of Health in his new Housing Bill was looking towards the local authorities. There were objections to that, and many would be glad to see some other form of ownership, such as semi-public ownership of the type exemplified by public utility societies and housing trusts. He would like to see in the new Bill some provisions for the practical encouragement of those societies. The aim of the Bill was to relieve overcrowding.

The Housing Bill and Decentralisation.

He personally could not give his wholehearted approval to the Bill. Some sort of subsidy was necessary, but his criticism of the measure was that the subsidy offered was not likely to aid, for the higher the local authorities had to pay for the land, the greater the subsidy. It was an admirable aim, but its effect was going to be to keep people in congested areas. His personal belief was that instead of binding ourselves to subsidies given for high valued sites, we should try decentralisation alike of population and industry, by founding garden cities. He was afraid that with a Bill such as now introduced the experiments would be found to create only more problems.

The President, responding, said that there could be no subject of greater interest nationally than housing. The Federation had things of great importance to discuss, and not the least was that a million houses would be required in the next ten years at rents of 10s. per week inclusive. That was an enormous task, and one that would have to be organised on a national basis. The Federation desired as a body to offer their services to meet that national need. Municipal bodies would have a large part to play. They were called upon to supply a survey and a report on the housing situation in so far as overcrowding was concerned. Both of those requirements, said the President, seemed to him extraordinary at this time of day. Surely they should be available at once, so as not to delay action further. Lord Balfour had said that public utility societies would play their part, and the building industry sincerely seconded that hope. Builders would do, in turn, their part—to build their best. They wished to see that the unqualified builder was prevented from putting up structures of poor quality. Any scheme in which Federated builders took part would be far above that standard. To succeed in furnishing the demand for houses, financial facilities would be required which builders would be unable to find themselves. Cheap money would be necessary for cheap houses. The Federation was opposed to subsidies. They had found that the higher the subsidy the higher the cost of the houses. While they must get rid of the principle of subsidies, anything that could be done to facilitate the supply of cheap money would be heartily welcomed.

The Need for Federation.

There were many house builders, continued the President, who were not federated, but the Federation was making efforts to deal with the problem, and to get such builders to become, if not full members, then at least associated. There was to this end a scheme for establishing a register of house builders. The need was imperative, in order to get uniformity of wages and working conditions. If uniformity could not be obtained, the dealings with the operatives might be broken down. The Federation had been engaged for many years in negotiation with the operatives for the control of wages and conditions. There were matters now up for discussion which he believed would be solved to the satisfaction of all parties concerned. Lord Balfour of Burleigh had referred to the housing of workers in flats. He personally did not think that flats were popular with the Englishman, and for that reason the ideal of decentralisation in garden cities put forward by his lordship was a great one.

The toast of "The Architects and Surveyors" was proposed by Mr. W. Bosworth, who said that the responsibility of the architect did not end with the interpretation of his art: his responsibility also included builders and operatives, and for that reason it was necessary to watch his progress closely. Sir Giles Gilbert Scott had said on more than one occasion that it was a disgrace that over 90 per cent. of building had had no architect in control. It was only fair to say, he thought, that no federated builder had had a part either. Great uneasiness was felt in the industry in regard to what he might call the "full" contractor question, the man who signed the contract and took the responsibility. That contractor was finding that the work he had to do and the measure of control he had to exercise was getting less and less, and the time might come when the contractor would wonder if it was worth his while to sign a contract in which he was given so little work, so little control, and such a great measure of responsibility. If that happened, it would be a bad thing for the industry, for the "full" contractor was its backbone. He was glad to note that local associations of architects, surveyors and federated builders were being formed, and hoped that such bodies would have great success.

Sir Giles Scott, in replying, paid tribute to the statesmanlike way in which the wages question had been conducted by Mr. T. Barron and the President of the Federation of Employers. That question, he was glad to note, was being dealt with by men whose records inspired the confidence of the whole building industry.

The toast of "The Guests" was wittily proposed by Mr. A. J. Arnold, and as wittily responded to by Mr. John M. Theobald.

After the speeches the company adjourned to dance.

Mr. W. Bosworth (Nottingham) has been elected President of the National Federation of Building Trade Employers for 1935-36.

Disallowed House Plans, Aberdeen.

The Aberdeen Town Council, by 29 votes to 6, approved the report of the Plans and Town Planning Committee not to accept plans for the erection of bungalows in Cromwell-road for Modern Homes (Aberdeen), Limited, it being the opinion of the committee that the proposed houses would be injurious to the amenity of the neighbourhood. The committee indicated that they would be prepared to reconsider the plans provided they were amended to show a greater use of granite in the front elevations of the houses.

INDUSTRIAL STATISTICS
1934

In reviewing the industrial statistics for the past year, no sensational features can be recorded, but they bear testimony to steady progress in nearly every direction. Even the figures relating to exports and imports show some improvement; and those who look for startling developments must remind themselves that although we inhabit an island we are every year becoming more affected by world conditions. When one country alone has fallen into bad times a quick recovery may be looked for, but when a whole world is in difficulties this cannot be the case, and under such adverse conditions, not to be going backward but to be making steady progress is all that can be expected, and is a sign of national health. Until the difficulties of international exchange can be surmounted, international trade is in fetters, and free interchange of commodities is an impossibility; but the one thing which would contribute most to recovery in international trade would be stability in the internal conditions of the several countries, and in this respect the steady progress made in this country under adverse conditions is of international importance. Although there are signs that our internal conditions may now permit of a bolder home policy, of which the new Housing Bill is a forerunner, rash experiments to gain speed might not only hinder the real progress we are making, but also endanger that stability which is of such importance to the whole world; and as regards unemployment it must be borne in mind that we by no means stand alone, as it is rife in nearly every country, and under wholly dissimilar conditions. With this brief foreword we turn to the statistics.

Employment and Unemployment.

It has come to be recognised that in regarding the question of unemployment the figures relating to those workpeople *in employment* must also be considered. The estimated average number of insured persons in employment on December 17, 1934, was 10,136,000, as compared with 9,681,000 on December 18, 1933—or an increase of 455,000 persons; and it must be noticed that this average was higher than in any previous year since the statistics commenced in 1924, with the one exception of the year 1929. The average number of insured persons unemployed fell to 16.6 per cent. in 1934, as compared with 18.8 per cent. in 1933. These figures relate to Great Britain alone, but in Great Britain and Northern Ireland the number of persons registered as unemployed (insured and uninsured) on December 17, 1934, was 2,150,741 (16.8 per cent.), as compared with 2,287,466 (19.9 per cent.) on December 18, 1933. Of these persons, 1,857,377 were wholly unemployed, including persons normally in casual employment, and 293,364 were temporarily stopped, as compared with 1,973,978 wholly unemployed and 313,488 temporarily stopped in 1933.

As regards the above figures relating to those persons *in employment* as given in the *Ministry of Labour Gazette*, it must be observed that they are based upon the estimated number of insured persons less the numbers recorded as unemployed and the numbers directly involved in trade disputes, with a further allowance of three and a half per cent. of the numbers insured in respect of absences from work through illness and other forms of unrecorded non-employment, but excluding recognised holidays. Thus it appears to us, as trade disputes are to some extent an abnormal element, to get a true estimate of the numbers employed under normal conditions it is necessary to see the numbers of persons directly involved in trade disputes in the years subject to comparison, and we find that in the years 1934 and 1933 the numbers of workpeople so affected were respectively 108,000 and 114,000—a difference not very material.

There is, however, a further matter which should be taken into consideration with reference to the numbers of unemployed, to which attention was called in *The Times* for January 14, that is the decline in emigration since the War. In the pre-War decade the excess of outward British passengers from this country to other countries, outside Europe and not within the Mediterranean Sea, over inward passengers was 1,932,831, but in the 1924-1933 decade this excess had dropped to 461,255, and in the last three years of this period the number of immigrants has exceeded the number of emigrants by 118,747. In the *Labour Gazette*, unemployment in the building, woodworking, etc., trades, is given as an average of 18.7 per cent. in 1934, as compared with 24.1 per cent. in 1933; but in public works contracting the year is stated to have been bad throughout, the percentage of unemployment varying between 48.4 per cent. and 42.8 per cent.

Rates of Wages and Cost of Living.

The year 1934 was marked by showing for the first year since 1926 an increase in the estimated rates of wages of workpeople affected by changes in the rates of wages, the net result being a weekly increase of £89,000, as against a net decrease in the previous year of £65,250. The increase is estimated as representing about one per cent. in the average level of weekly full-time wages. About £13,850 of the increases took effect under cost-of-living scales, and about £8,300 under sliding scales based upon selling prices, etc. Of the changes in hours of labour, most of the changes were in reduction of hours in the week.

There were fluctuations during the year in the cost of living, the lowest figure reached being 37 per cent. above pre-War level in May; but on January 1, 1935, the figure stood at 43, as compared with 42 on the previous January 1. Working-class rents remained practically unchanged at 56 per cent., as compared with July, 1914.

Trade Disputes.

As regards trade disputes, the year, as far as loss of working days were concerned, created a record in the whole forty years during which comparable statistics are available, the working days lost being but 960,000. There were 472 disputes, involving directly 108,000 persons, and indirectly 25,000, as compared with 114,000 directly affected and 22,000 indirectly affected in the year 1933, when the loss of working days was 1,070,000, a figure which also constituted a record for its small total until the year under review. As regards the building trade, the figures given in the *Gazette* afford little indication of the true position in that trade, as they are combined with "public works, contracting, etc.," and show 44 disputes involving 8,000 persons and a loss of 172,000 working days, as compared with 20 disputes involving 1,300 persons and a loss of 9,000 working days in 1933.

A CONCRETE BRICKMAKING PLANT

A NEW works for making concrete bricks has been established by Messrs. Hurtons, Ltd., at Colnbrook, where a machine has been installed capable of turning out 5,000 bricks an hour. The operation of the machine is as follows: The materials — crushed ballast, sand and cement—are conveyed in a mixer-loading hopper to the mixer at the top of the machine, where dry mixing of from thirty seconds to a minute takes place. Water is then added, and wet mixing for a minimum of one minute follows. The mix is then emptied from the mixer into an intermediate hopper, from which it falls into a filler-box. This box, which has no bottom, is pushed forward on rollers over the mould boxes, beneath which two wooden pallets, each affording space for eight bricks, have already been placed in position by a conveyor. A vibratory movement then takes place to give compactness to the material. The filler-box is then withdrawn, leaving the mould boxes full. A tamper weighing 26 cwt. then descends twice, and the mould boxes lift, leaving two rows of eight bricks each on the pallets. Conveyor ropes underneath the pallets are then lifted sufficiently to take the first pallet, the second pallet being pushed forward by the pallet conveyor on to the rope conveyor, from which, after they have travelled a few yards, passing beneath a revolving brush that removes any loose material, they are lifted off by two boys on to stands which, when fully loaded, are removed on Slingsby trucks for storage. A period of three weeks is allowed for curing. The bricks are the same size as but heavier than the ordinary clay brick, 1,000 weighing approximately three tons. In addition to the plain concrete brick, it is proposed to make facings, using a finer aggregate and coloured cements. The plant is expected to be in full operation shortly.

NEW PUBLIC WORKS

CHAILEY.—R.D.C. invite tenders for erection of 48 houses. Specifications from Council's Architect, Mr. R. P. Cheale, Council Offices. Deposit, £2 2s. Tenders by March 7.

CHESTERFIELD.—New municipal offices are proposed by the Corporation at Rose Hill, Chesterfield, to plans by Messrs. Bradshaw Gass & Hope, FF.R.I.B.A., 9, Silverwell-street, Bolton. Applications must be made by February 6, together with a deposit of £5, to Mr. J. L. Feather, town clerk.

CORNWALL.—Plans for extensions and alterations to the Bude and Stratton Cottage Hospital, Stratton, Cornwall, have been prepared by Messrs. Andrew and Randell, architects, St. Austell, and the work, for which builders have been invited to send in tenders not later than February 9, is to be put in hand as early as possible.

DERBY.—Tenders invited for erection of 17 houses: (a) 2 houses, Shakespear-street; (b) 15 houses, Harvey-road. Form of tender obtainable from Mr. C. H. Aslin, F.R.I.B.A., Borough Architect, Gower-street. Deposit, £1 1s. Tenders, February 14.

DEVON.—The British Broadcasting Corporation, Portland-place, W.1, have under consideration the erection of a new broadcasting station in Devon or Cornwall, and have acquired options on sites at Freethy, near Whitsand Bay, and Rame Head. Other sites are being considered. The chief engineer to the corporation is Mr. M. T. Tudsbery, M.I.C.E.

DUNSTABLE.—Mr. Oswald P. Milne, F.R.I.B.A., 64, Wigmore-street, W.1, has prepared plans for a new public elementary school at Dunstable. Bedfordshire C.C. now invite applications to tender, which must be sent by February 12, with £2 2s. deposit, to Mr. Milne.

ESSEX.—(a) E.C. invite tenders for additions and alterations at Leyton County High School for Boys. Specifications from County Architect. (b) Public Assistance Committee invite tenders for additions to house block and erection of a lift shaft at Maldon Institution. Specification from County Architect. Applications not later than February 6, accompanied by a deposit of £1 1s. in each case, to Mr. H. W. Collis, A.I.M.T.A., County Accountant, County Hall, Chelmsford.

GUILDFORD.—Alterations and extensions are proposed at Woodbridge Isolation Hospital, for the Guildford, Godalming and Woking Joint Hospital Board. Plans are by Messrs. J. H. Norris and Co., architects to the Board, 116, High-street, Guildford, and tenders are now invited, upon deposit of £2 2s. The closing date is February 19.

KIMBOLTON.—Hunts C.C. propose extensions of Kimbolton Grammar School by the addition of a laboratory, assembly hall, classrooms, staff-rooms, etc. Quantities, etc., are obtainable from Mr. T. H. Longstaff, county architect, Huntingdon, on deposit of £2 2s. Tenders by February 21.

MILLWALL.—Tenders are to be invited by the L.C.C. for the reconstruction of Millwall Lock Bridge, which is to cost £102,500.

PLYMOUTH.—Tenders invited for alterations to Frederick-street School, Plymouth. Applications to City Architect, Rowe-street, Plymouth, by February 4, with a deposit of £2 2s.

NEW BUILDINGS IN LONDON

ALPERTON.—School.—The Middlesex C.C. has recommended the tender of Messrs. W. Lay and Son, Ltd., Ashmore-road, W.9, at £23,007 5s. 9d., for the erection of an elementary school in Vincent-road.

ALPERTON.—School.—The Middlesex C.C. intend to provide a new public elementary school for about 480 junior and infant children on the Manor Farm housing estate.

BANKSIDE.—Rebuilding.—Messrs. Beck and Pollitzer, Universal House, Southwark-bridge, S.E.1, are to rebuild No. 26. The plans have been approved by the Southwark B.C.

BARKING - ROAD. — Hall.—Gymnasium hall and memorial library is to be erected adjoining the mission church. Mr. S. Jaques, A.R.I.B.A., 119, Moorgate, E.C.2, is the architect. The plans have been approved by the West Ham B.C. No building contracts have yet been placed.

BARKING - ROAD. — Home. — Mr. S. Jaques, A.R.I.B.A., 119, Moorgate, E.C.2, is the architect for a home for aged men at the Queen's Garden, Liddon-road. Mr. A. Saunders, Western-road, Brentwood, is the contractor.

BARNET.—Building.—The Herts. P.A.C. recommends isolation unit, Wellhouse Hospital, at £6,255; and conversion of casual wards to chronic and infirm wards at £3,915.

BATTERSEA. — Housing. — The L.C.C. Housing Committee has approved lay-out plans for 77 dwellings on the Didcot-street site. The estimated cost is £33,900.

BECONTREE.—Hall.—The Grays Co-operative Society, Ltd., 68, High-street, Grays, have acquired a site in St. George's-road for a new hall. The plans are being prepared by Mr. L. G. Ekins, F.R.I.B.A., architect to the Co-operative Wholesale Society, 99, Leman-street, E.1, and the building will be erected by the Grays Society.

BETHNAL GREEN.—Dwellings.—Messrs. Wilson Lovatt and Sons, Ltd., Clarence-street, Wolverhampton, have secured the contract at £20,832 for erection of 59 dwellings on the Dinmont estate, for the L.C.C.

BLACKHEATH.—Flats.—Messrs. Annesley, Brownrigg and Hiscock, architects, are to erect blocks of flats on a site upon the southern side of Dartmouth-grove.

BRENTFORD.—Extensions.—The Thompson and Norris Manufacturing Co., Ltd., have accepted the tender of Messrs. Walter Lawrence and Son, Ltd., 31, Sun-street, E.C.2, for an extension to their factory in the Great West-road. The plans have been prepared by Mr. Robert Sharp, L.R.I.B.A., 28, Victoria-street, S.W.1.

BRENTFORD.—Offices.—At an estimated cost of £20,000 the Middlesex C.C. has approved in principle the erection of the new local offices on land in Glenhurst-road, to provide accomodation for Public Assistance, Local Taxation, Public Control, Highways and Registration purposes. Tenders are to be obtained in accordance with the drawings and specifications prepared by the County Architect, Mr. W. T. Curtis, F.R.I.B.A.

BRIXTON.—Dwellings.—The L.C.C. has placed a contract with Messrs. R. J. Rowley, Ltd., Belmont-avenue, Tottenham, N.17, at £25,382, for erection of blocks Nos. 8 and 14 on the Vassall-road site, and road finishings.

CARNABY-STREET.—Alterations.— And additions are to be made to premises for the St. James's and Pall Mall Electric Light Co., Ltd. The plans have been prepared by Messrs. Stanley Peach and Partners, 60, Warwick-square, S.W.1.

CLAPHAM JUNCTION. — Rebuilding. — Mr. Henry Branch, 25, Cheapside, E.C.2, is the architect for the rebuilding of Messrs. Hastings' premises at Clapham Junction, next to Mossbury-road. No contracts have yet been placed.

CLERKENWELL.—Buildings. — The contract for the reconstruction of the old buildings of the Merchant Taylors' School, Charterhouse-square, E.C.1, and the erection of a new medical school for the governors of St. Bartholomew's Hospital, West Smithfield, E.C.1, has been placed with Messrs. Wilson Lovatt and Co., Ltd., Abbey House, Victoria-street, S.W.1. The plans have been prepared by Messrs. Lanchester and Lodge, FF.R.I.B.A., 19, Bedford-square, W.C.1.

CORNHILL.—Rebuilding.—Messrs. F. G. Minter, Ltd., Ferry-works, Putney, S.W.15, are rebuilding Nos. 31 and 32. Messrs. Gunton and Gunton, Empire House, St. Martin's-le-Grand, E.C., are the architects.

CROYDON.—Alterations.—Messrs Courage and Co., Ltd., Anchor Brewhouse, Horselydown, S.E.1, are to alter and add to the "Duke of York" public-house in Canterbury-road.

CROYDON.—Premises.—The C.B. has approved plans for Messrs. Page and Overton Brewery, Ltd., 19, Surrey-street, Croydon, for licensed premises in Cecil-road and Brading-road.

DAGENHAM.— Building.— The following applications are to be made at the Licensing Justices' annual meeting on February 9:— Messrs. Taylor, Walker and Co., new premises upon the site of "The Beacon," Oxlow-lane, and premises at the corner of New-road and Ballards-road; Mr. G. A. Smith, new premises at the junction of Oxlow-lane and Rainham-road at the corner of the Wantz Field Estate on the south side of the road leading to Hornchurch and Romford; Mr. T. F. Smith, premises upon the site of "The Vernon Stores Off-licence," Broad-street; Mr. J. R. Moyler, premises at the corner of Romford-road and Hainault-road, and Mr. T. D. Golding, premises on the north side of Foxlands-road and the south side of Durham-road.

DAGENHAM.—Houses.—The U.D.C. are proposing to erect 74 houses on the Mill Park housing estate extension.

EPSOM.—Additions. — Involving about £6,000 are to be made to the buildings of Epsom College to the plans of Messrs. Charles Barry and Son, Parliament-mansions, Victoria-street, S.W.1.

FINCHLEY.—Rebuilding.—Of the departmental premises in High-street of Messrs. W. Jelks and Son, Ltd., furnishers, is about to begin, the tender of Messrs. Dove Bros., Ltd., 1, Cloudesley-place, Islington, N., having been accepted. The architect is Mr. A. V. Pembroke, 36, Victoria-street, S.W.1.

GOODMAYES.—Premises.—The Liverpool and Victoria Friendly and Approved Societies, Southampton-row, W.C.1, have acquired a site in the High-road for new premises.

GROSVENOR-ROAD.—Flats. — The Fillmore Construction Co., Ltd., 27, John-street, Bedford-row, W.C.1, propose the erection of a block of flats on the site of the old Army Clothing Factory. The complete scheme is to cost £1,750,000. The architect is Mr. H. Douglas Ives, 3, Carlos-street, W.1.

HANWORTH.—Additions.—Including new club premises, etc., are to be made to the London Air Park, for the London Air Syndicate, Ltd., for which a contract has just been placed with Messrs. E. D. Winn and Co., Ltd., 36, Wilton-place, S.W.1. Contracts for a hangar of 12,000 sq. ft. have not yet been settled. The plans have been prepared by Mr. Ernest G. W. Souster, F.R.I.B.A., 3, St. James's-street, S.W.1.

HESTON.—Extensions. — Contracts have been placed with Messrs. Walter Lawrence and Son, Ltd., 31, Sun-street, E.C.2, for building works, and Messrs. Boulton and Paul, Ltd., Norwich, for steelwork, for the large workshops and hangar at Heston Air Port. The architects are Messrs. Norman, Muntz and Dawbarn, 43, Grosvenor-place, S.W.1.

HORNSEY. — Pavilion. — The Middlesex C.C. recommend the tender of Messrs. Newby Bros., Ltd., of Southgate, amounting to £2,380, for the erection of a sports pavilion with classrooms on the playing fields of the Hornsey County School. The plans are by the County Architect, Mr. W. T. Curtis, F.R.I.B.A.

ILFORD.—Library.—The Borough Engineer to the T.C. has prepared plans for a new branch library on the Gants Hill site at the junction of Cranbrook-road and Headley-approach. The scheme is estimated to cost about £12,000, and is to be considered.

ILFORD.—Premises.—Mr. G. H. Goldsmith, F.R.I.B.A., 44, Great Russell-street, W.C.1, is the architect for new bank premises at the corner of High-road and Wangye-lane. Messrs. Stedman, New North-road, Barkingside, are the builders.

ILFORD. — Extensions. — The T.C. has received sanction from the Ministry to borrow £30,000 for extensions to the maternity home, Eastern-avenue. The heating arrangements are by Mr. Roger Preston, consulting engineer, 10, Talbot-mansions, Museum-street, W.C.1. The plans are by Mr. L. E. J. Reynolds, M.Inst.C.E., Borough Engineer, and Mr. J. F. Cavanagh, L.R.I.B.A., architectural assistant. The building contract has been placed with Messrs. A. E. Symes, Ltd., 1a, Carpenters-road, Stratford, E.15.

ILFORD. — Houses. — Messrs. Hilbery Chaplin, Ltd., 4, Russell-parade, N.W.11, have had plans passed by the T.C. for 20 houses in Longwood-gardens, 22 in Dellwood-gardens, 36 in Wray-avenue, 40 in Evesham-way, and 104 in Rushden-gardens.

ILFORD.—Houses.—Messrs. W. Goodchild and Co., estate agents, 85, South-street, Romford, are erecting 50 houses at 192-290, Staines-road.

KENLEY.—School.—The Surrey E.C. has accepted the estimate of Mr. H. Hann, 40, High-street, Collier's Wood, S.W.19, at £11,391 for the erection of a junior mixed and infants' school. The architects to the E.C. are Messrs. Jarvis and Richards, 8a, Lower Grosvenor-place, S.W.1.

KENSINGTON.—Shops.—And flats are to be erected shortly on the site of Nos. 34-38, St. Mary Abbots-terrace, W. Demolition and excavation works are in the hands of the London Demolition Co., Ltd., London-road, Isleworth. The contractors are Messrs. F. and H. F. Higgs, Ltd., Station Works, Hinton-road, Herne Hill, S.E. The plans have been prepared by Mr. H. C. Wilkerson, L.R.I.B.A., 10, Duke-street, W.C.2.

KINGSTON-ON-THAMES.—Rebuilding.—Demolition has commenced at the corner of Clarence-street and Wood-street preparatory to the rebuilding of a large portion of the departmental stores of Messrs. Bentalls, Ltd. The contractors are Messrs. John Mowlem and Co., Ltd., Ebury Bridge-road, S.W.1. The architects are Sir Aston Webb and Son, 19, Queen Anne's-gate, S.W.1.

LAMBETH.—Rebuilding.—Messrs. Meux's Brewery Co., Ltd., Nine Elms-lane, Battersea, S.W., have under consideration the rebuilding of their public-house, the "Anchor and Hope," 19, Great Charlotte-street. The plans have been prepared by the brewery architect, Mr. W. F. Foster, F.R.I.B.A., 45, Nine Elms-lane, S.W.8. No contracts have been let.

MARYLEBONE. — Premises. — Messrs. Wallis, Gilbert and Partners, 15, Elizabeth-street, S.W.1, are the architects for new premises in Carlisle-street for Messrs. Bovis.

MITCHAM.—Estate. — The New Ideal Homesteads, Ltd., Ideal House, Carlton-road, Erith, have acquired the 8-acre estate adjoining Mitcham Park for the erection of a large number of houses. The work will be carried out by the company.

NORTH ACTON.—Factory.—And offices are to be erected at Bashley-road, W., for the Universal Soap Co., Ltd., 426, Abbey House, Victoria-street, S.W.1. The plans have been prepared by Messrs. A. Sutton and Partners, Abbey House, Victoria-street, S.W.1.

NORTH ACTON. — Factory. — Messrs. Carltons, Ltd., Victoria-road works, Acton, N.W.10, are to build an additional factory in Victoria-road. Tenders are to be shortly invited. The architect is Mr. A. Alban H. Scott, F.R.I.B.A., 30, Bouverie-street, E.C.4.

OXFORD - STREET.—Rebuilding.—Messrs. James Carmichael (Contractors), Ltd., 331,

Trinity-road, Wandsworth, S.W.18, and Messrs. Moreland Hayne and Co., Ltd., 80, Goswell-road, E.C.1, have secured the contracts for the building and steelwork respectively for the rebuilding of Messrs. D. H. Evans and Co., Ltd., Mr. Louis Blanc, L.R.I.B.A., of Messrs. Harrod's Store, is the architect.

PUTNEY.—REBUILDING.—And enlargement of the garage and depot at Chelverton-road, S.W., of the L.P.T.B., is to be commenced shortly, the tender of Messrs. J. Jarvis and Sons, Ltd., 8, Wormwood-street, E.C.2, having been accepted. Plans have been prepared by Messrs. Wallis, Gilbert and Partners, 15, Elizabeth-street, S.W.1.

REGENT-STREET.—REBUILDING.—No. 295, owned by Messrs. Boosey and Hawkes, Ltd., is to be rebuilt. Plans are now being prepared and contracts will be placed shortly. The architects are Messrs. E. Howard and Partners, 3, St. James's-street, S.W.1.

REGENT'S PARK.—RESIDENCE.—Plans have been prepared by Sir John Burnet, Tait and Lorne, 1, Montague-place, W.C.1, for a large residence at No. 62, Avenue-road, N.W. The contract has been placed with Messrs. William F. Blay, Ltd., Railway House, Dowgate-hill, E.C.4. The cost will be about £8,500.

ST. PANCRAS.—ALTERATIONS.—Plans have been approved for alterations to the Midland Grand Hotel for the L.M. and S. Railway, and tenders are to be shortly invited. The company's architect is Mr. W. H. Hamlyn, A.R.I.B.A., Euston Station, N.W.1.

ST. PANCRAS.—FLATS.—Are being erected at Osnaburgh-terrace, W.C.1, from plans prepared by Mr. Robert Atkinson, F.R.I.B.A., 13, Manchester-square, W.1, and erected by Sir Lindsay Parkinson and Co., Ltd., 171, Shaftesbury-avenue, W.C.2. The Trussed Concrete Steel Co. are responsible for the floors.

SANDERSTEAD. — FIRE STATION. — The Coulsdon and Purley U.D.C. has approved a fire sub-station with two flats over, a drill tower and six cottages in Limpsfield-road, at £17,422.

SHENLEY. — BUILDING. — The Middlesex C.C. has approved a contract with Messrs. J. Laing and Son, Ltd., of Mill Hill, N.W., at £13,234 17s. 11d., for the development of the nurses' home at the Middlesex Colony and the provision of a lodge at the main entrance.

SOUTH KENSINGTON.—BUILDINGS.—The contract for new buildings for the Institut Francais du Royaume Uni (the French University College), Cromwell-gardens, S.W.7, has been placed with Messrs. Kirk and Kirk, Ltd., 287, Upper Richmond-road, Putney, S.W, and Messrs. Baffrey-Hennebique, 1, Rue Danton, Paris. The architect is Mr. A. J. Thomas, F.R.I.B.A., 5, Eaton-gate, S.W.1.

SOUTHWARK.—FLATS.—The City of London Corporation are to proceed with a block of working-class flats in the Tupman-place clearance area. The contract has been placed with Messrs. Walter Lawrence and Son, Ltd., 31, Sun-street, E.C.1. The architect is Mr. Victor Wilkins, F.R.I.B.A., 12, York-buildings, W.C.2. The cost is estimated at £31,500.

SOUTHWARK.—PREMISES.—Messrs. Watney, Combe, Reid and Co., Ltd., Stag Brewery, Pimlico, S.W.1, are to erect new licensed premises to be known as the "Uxbridge Arms" on a site at the junction of Avonmouth-street and Bath-terrace. The plans are being prepared by the company's architect, Mr. A. W. Blomfield, F.R.I,B.A. No contracts have yet been placed.

STEPNEY. — DWELLINGS. — A sum of £25,800 is recommended by the L.C.C. Housing Committee for the erection of 58 dwellings on the Medland-street site.

STEPNEY.—BUILDING.—The B.C. are to invite tenders for the erection of a central sub-station at Sutton-street East, Shadwell, E.1. The plans are by the Borough Engineer and Surveyor, Mr. B. J. Belsher, F.R.I.B.A. Messrs. W. E. Davis and Son, 34, Red Lion-square, W.C., are the quantity surveyors.

STEPNEY.—DISPENSARY.—The B.C. has placed a contract with Messrs. Ashby and Horner, Ltd., 8, Aldgate, E.C.3, at £6,193, for a new tuberculosis dispensary in Devonport-street. Mr. Louis de Soissons, S.A.D.G., F.R.I.B.A., Blue Ball-yard, S.W.1, is the architect.

THORNTON HEATH.—SHOPS.—Messrs. Armstrong's Etates, Ltd., Redroofs, Winterhill-way, Burpham, Guildford, have acquired a site in London-road, for a block of 5 shops with 68 flats in the upper floors. The company will carry out the work themselves.

TOLWORTH.—FACTORY.—Messrs. Celluloid Printers, Ltd., 204, South Park-road, Wimbledon, S.W., have acquired a site on the Kingston By-pass-road for a factory with offices, stores, etc. The contract has just been placed with Messrs. Truett and Steel, Ltd., 71, High-street, Thornton Heath. The plans have been prepared by Mr. Hugh Macintosh, F.R.I.B.A., 1, Imperial-buildings, Croydon, East.

TOTTENHAM.—FACTORY.—Stores, offices, etc., are to be erected in Queen-street, for Messrs. Hyman Lazarus (Cabinet Works), Ltd., Mount Pleasant-hill, E.5. The plans are being prepared by Messrs. S. Clifford Tee and Gale, 50, Moorgate, E.C.2. No contracts have been placed yet.

TWICKENHAM.—EXTENSIONS.—Are to be made to the film studios at St. Margaret's for the Twickenham Film Studios, Ltd. The work will be carried out by direct labour to the plans of the art director, Mr. J. Carter.

UPMINSTER.—ALTERATIONS. — And additions are to be made to the Convent of the Sacred Heart. The contractors are Messrs. Hammond and Miles, Ltd., Scrafton-road works, Ilford. The architects are Messrs. Marshall and Partners, 3, Arundel-street, W.C.2.

WALTHAMSTOW. — HOUSES. — The T.C. has resolved that, subject to the approval of the M. of H., the tender of the Borough Engineer and Surveyor for the erection of 20 houses and flats at Priors Croft, at £5,060, be accepted.

WEMBLEY.—REBUILDING.—Of a portion of Wembley Station is to be put in hand by the L.M. and S.R. Co. The contract has been placed with Messrs. G. and J. Waterman, Ltd., 103, High-street, Watford. The plans have been prepared by the company's staff at Euston Station, N.W.1.

WEST HAM. — EXTENSIONS.—To the factory of Messrs. Winstone and Sons' premises in Sugar House-lane are to be made from plans prepared by Messrs. Stanley Peach and Partners, 60, Warwick-square, S.W.1.

WEST HAM.—SHOWROOM.—Messrs. Ray Powell, Ltd., motor dealers, 307, Romford-road, E.7, are to have a new garage showroom and petrol station erected at 294-296, Romford-road.

WEST HAM.—ALTERATIONS.—And additions are to be made to the "Ordnance Arms" public-house, Barking-road, for Messrs. Truman, Hanbury, Buxton and Co., Ltd., 91, Brick-lane, E.1.

WESTMINSTER.—OFFICES. — Plans have been approved for a block of offices at the corner of Thorney-street and Page-street, S.W.1, the architects being Messrs. E. Howard and Partners, 3, St. James's-street, S.W.1. The contract has been placed with Messrs. Gee, Walker and Slater, 32, St. James's-street, S.W.1.

WESTMINSTER.—FLATS.—The Reinforced Concrete Steel Co., Ltd., 3, Old Queen-street, S.W.1, are connected with a scheme for the erection of flats in St. Leonard's-street, S.W.1.

WILLESDEN.—MODERNISATION.—The Middlesex C.C. recommend the modernisation of the ward blocks at the Central Middlesex County Hospital, Acton-lane. The County Architect, Mr. W. T. Curtis, F.R.I.B.A., is to prepare the necessary drawings and obtain tenders for two of the blocks.

WOOLWICH. — COURT. — H.M.O.W. have placed a contract with the Commercial Structures, Ltd., 38/44, Canal-road, N.1, for a new county court.

TRADE NEWS

An Appointment.

Mr. Howard Foulds, Pres.C.I.S., and Mr. E. M. Malek, M.I.E.E., have been appointed advisory directors of Callender's Cable and Construction Co., Ltd.

A Bank Dividend.

The directors of the Midland Bank, Ltd., recommend a final dividend, payable February 1, at the rate of 16 per cent. The net profits for 1934 were £2,292,217.

Industrial Vacuum Cleaning.

Sturtevant Engineering Co., Ltd., issue from 147, Queen Victoria-street, E.C.4, a new industrial vacuum cleaning catalogue, containing illustrated details of their latest practice. Copies are obtainable upon mentioning this paper.

Standard Baths for Housing Schemes.

In connection with one of the Leeds Corporation's housing schemes, an order has been placed by Industrial Builders, Ltd., with a Leeds firm for 3,000 "I.B.A. Artisan" baths. Five hundred "I.B.A. Artisan" baths are also to be used for a speculative housing scheme in Romford, and there are other substantial orders for municipal schemes in South Shields, Widnes and Cheltenham.

Trade Opportunity, South Africa.

H.M. Senior Trade Commissioner in South Africa reports that the South African Railways and Harbours Administration is calling for tenders, to be presented in Johannesburg by February 25, for the supply of steelwork for a foot-bridge, and steelwork in a 30-ft. plate girder skew-trough span for replacement of a bridge. Firms desirous of offering steelwork of United Kingdom manufacture can obtain the further details of this call for tenders, together with particulars of the "special register" service of information, upon application to the Department of Overseas Trade, 35, Old Queen-street, London, S.W.1. Reference number G.Y.14733 should be quoted.

A New Type of Refrigerator.

Since the application of electric refrigeration to food storage, the refrigerator has become more and more important in the household. Unfortunately, the majority of newer houses and flats are equipped with kitchens with limited floor space, and in order to produce a small, efficient refrigerator with ample storage room, experts have planned an entirely new type of automatic refrigerator, known as the "Liftop," and placed on the market by the International Refrigerator Company, Ltd. As its name implies, it is fitted with a hinged lid—instead of doors—which, when closed, seals the cabinet. This innovation gives more storage room, and allows the contents to be reached easily. The design of the "Liftop" is also new, and its modern form, which occupies no more floor space than an ordinary chair, should suit every type of kitchen.

Water Heating by Electricity.

The General Electric, Co., Ltd., send us a brochure, "Water Heating by Electricity," which gives very full information regarding the application of their "Magnet" electric water heaters. The convenience of electric water heating is now generally recognised, and with steady reductions in rates for the supply of current for this purpose there is a rapidly increasing business to be done. This falls into two categories: complete self-contained electric water heaters for all-the-year-round use, and conversion equipment. The latter consists of immersion heaters, thermostats, circulators, etc., for heating water electrically in existing tanks or cylinders, as a subsidiary to a fuel-fired boiler in the winter months, or to avoid the necessity for lighting a fuel-fired boiler at all during summer months.

Also to hand is a new booklet just published on G.E.C. Tubular Heaters. Copies of these are obtainable from Magnet House, Kingsway, W.C.2.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1935.

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Crafts-men.	Lab-ourers.
Aberdare	1/5	1/0¾
Abergavenny	1/5	1/0¾
Abingdon	1/4	1/0
Accrington	1/5½	1/1¼
Aldeburgh	1/1½	10¼
Aldershot	1/2½	11
Alfreton	1/5½	1/1¼
Alnwick	1/4½	1/0½
Altrincham	1/5½	1/1¼
Amble	1/4½	1/0½
Amersham	1/3½	11¾
Ammanford	1/5½	1/1¼
Andover	1/2½	11
Arundel	1/3	11¼
Ascot	1/3½	11¾
Ashby-de-la-Zouch	1/4	1/-
Ashford (Kent)	1/2½	11
Ashford (Middx.)	1/4½	1/0½
Ashington	1/4½	1/0½
Ashtead	1/4	1/-
Ashton-under-Lyne	1/5½	1/1¼
Aylesbury	1/3	11¼
Aylsham	1/2½	11
Bagshot	1/2½	11
Banbury	1/3	11¼
Barnsley	1/5½	1/1¼
Barnstaple	1/3½	11¾
Barrow-in-Furness	1/5½	1/1¼
Barry	1/5½	1/1¼
Basingstoke	1/3	11¼
Bath	1/4½	1/0½
Batley	1/5½	1/1¼
Beaconsfield	1/3½	11¾
Beccles	1/2	10½
Bedford	1/4½	1/0½
Berkhamsted	1/3	11¼
Berwick	1/4½	1/0½
Beverley	1/5½	1/1¼
Bexhill-on-Sea	1/3½	11¾
Bideford	1/3½	11¾
Biggleswade	1/3	11¼
Billericay	1/3	11¼
Birchington	1/3	11¼
Birkenhead	1/7‡	1/2½
Birmingham	1/5½	1/1¼
Bishop Auckland	1/5	1/0¾
Bishops Stortford	1/4	1/0
Blackburn	1/5½	1/1¼
Blackpool	1/5½	1/1¼
Blyth	1/5½	1/1¼
Bognor Regis	1/3	11¼
Bolton	1/5½	1/1¼
Bournemouth	1/4½	1/0½
Bracknell	1/3	11¼
Bradford	1/5½	1/1¼
Bradford-on-Avon	1/2½*	11
Braintree	1/3½	11¾
Brentwood	1/5	1/0¾
Bridgwater	1/3½	11¾
Bridlington	1/5	1/0¾
Brighouse	1/5½	1/1¼
Brighton	1/4½	1/0½
Bristol	1/5½	1/1¼
Broadstairs	1/3	11¼
Bromsgrove	1/4½	1/0½
Bromyard	1/2	10½
Buckley	1/5½	1/1¼
Bungay	1/1½	10¼
Burnham-on-Crouch	1/2	10½
Burnley	1/5½	1/1¼
Burslem	1/5½	1/1¼
Burton-on-Trent	1/5½	1/1¼
Bury	1/5½	1/1¼
Bury St. Edmunds	1/3	11¼
Buxton	1/5	1/0¾
Byfleet	1/3½	11¾
Cambridge	1/5	1/0¾
Canterbury	1/3	11¼
Cardiff	1/5½	1/1¼
Carlisle	1/5½	1/1¼
Carnforth	1/5½	1/1¼
Castleford	1/5½	1/1¼
Caterham	1/4	1/-
Chard	1/2½*	11
Chatham	1/4	1/-
Chelmsford	1/4	1/-
Cheltenham	1/4	1/-
Chepstow	1/4½	1/0½
Chertsey	1/4	1/-
Chester	1/5½	1/1¼
Chesterfield	1/5½	1/1¼
Chichester	1/3	11¼
Chorley	1/5½	1/1¼
Cirencester	1/3*	11¼
Clacton	1/3½	11¾
Cleveleys	1/5½	1/1¼
Clitheroe	1/5½	1/1¼
Cobham	1/4	1/-
Colchester	1/4½	1/0½
Colwyn Bay	1/4½	1/0½
Congleton	1/5	1/0¾
Coventry	1/5½	1/1¼
Cranbrook	1/2	10½
Cranleigh	1/2½	11
Crawley	1/3	11¼
Crewe	1/4½	1/0½
Cromer	1/2½	11
Crowborough	1/3	11¼
Cuckfield	1/3	11¼
Darlington	1/5½	1/1¼
Darwen	1/5½	1/1¼
Daventry	1/4	1/-
Deal	1/3	11¼
Denbigh	1/4	1/-
Derby	1/5½	1/1¼
Devizes	1/2*	10½
Dewsbury	1/5½	1/1¼
Didcot	1/3½	11¾
Diss	1/2	10½
Doncaster	1/5½	1/1¼
Dorchester	1/3*	11¼
Dorking	1/3½	11¾
Dover	1/3	11¼
Dovercourt	1/3½	11¾
Driffield	1/4	1/-
Droitwich	1/4½	1/0½
Dudley	1/5½	1/1¼
Dunstable	1/3½	11¾
Durham City	1/5½	1/1¼
Eastbourne	1/4½	1/0½
E.Glam.(Mon.Val.)	1/5	1/0¾
East Grinstead	1/3½	11¾
Edenbridge	1/3	11¼
Ely	1/2	10½
Epping	1/4½	1/0½
Exeter	1/4½†	1/0½
Exmouth	1/3½	11¾
Fakenham	1/2	10½
Falmouth	1/4	1/-
Fareham	1/3	11¼
Faversham	1/2½	11
Felixstowe	1/4	1/-
Filey	1/4	1/-
Fleetwood	1/5½	1/1¼
Flint	1/5	1/0¾
Folkestone	1/3	11¼
Frinton-on-Sea	1/3½	11¾
Frome	1/2½*	11
Gainsborough	1/4½	1/0½
Gateshead	1/5½	1/1¼
Gillingham	1/4	1/0
Glossop	1/5	1/1¼
Gloucester	1/4½†	1/0½
Godalming	1/3½	11¾
Goole	1/4½	1/0½
Gosport	1/4½	1/0½
Grantham	1/4	1/-
Gravesend	1/5	1/0¾
Gt. Yarmouth	1/3½	11¾
Grimsby	1/5½	1/1¼
Guildford	1/3½	11¾
Guilsborough	1/4	1/-
Halifax	1/5½	1/1¼
Hanley	1/5½	1/1¼
Harpenden	1/4	1/-
Harrogate	1/5½	1/1¼
Hartlepools	1/5½	1/1¼
Harwich	1/3½	11¾
Haslemere	1/2½	11
Hastings	1/3	11¼
Hatfield	1/4½	1/0½
Haywards Heath	1/3	11¼
Hednesford	1/5	1/0¾
Hemel Hempstead	1/4½	1/0½
Henley	1/3½	11¾
Hereford	1/3½*	11¾
Herne Bay	1/3	11¼
Hertford	1/4½	1/0½
Heysham	1/5½	1/1¼
Hitchin	1/4	1/-
Hoddesdon	1/4½	1/0½
Holt	1/1½	10¼
Horley	1/3	11¼
Horsham	1/3	11¼
Horwich	1/5½	1/1¼
Huddersfield	1/5½	1/1¼
Hull	1/5½	1/1¼
Hunstanton	1/2	10½
Huntingdon	1/2½	11
Ilfracombe	1/3½	11¾
Ingatestone	1/3	11¼
Ipswich	1/4½	1/0½
Isle of Thanet	1/3	11¼
Isle of Wight	1/2½	11
Keighley	1/5½	1/1¼
Kenilworth	1/5½	1/1¼
Kettering	1/5	1/0¾
Kidderminster	1/4½	1/0½
King's Lynn	1/3	11¼
Kirkham	1/5½	1/1¼
Knowle	1/5	1/0¾
Lancaster	1/5½	1/1¼
Leamington	1/5	1/0¾
Leatherhead	1/4½	1/0½
Leeds	1/5½	1/1¼
Leicester	1/5½	1/1¼
Leighton Buzzard	1/2½	11
Letchworth	1/4	1/-
Lewes	1/2	10½
Lichfield	1/4½	1/0½
Lincoln	1/5½	1/1¼
Littlehampton	1/3	11¼
Liverpool	1/7‡	1/2½
Llandudno	1/4½	1/0½
Llanelly	1/5½	1/1¼
London—		
12 m. radius	1/7*	1/2¼
12-15 m. radius	1/6½*	1/2
Long Eaton	1/5½	1/1¼
Longton	1/5½	1/1¼
Loughborough	1/5½	1/1¼
Louth	1/4	1/-
Lowestoft	1/3½	11¾
Luton	1/5	1/0¾
Macclesfield	1/5	1/0¾
Maidenhead	1/4	1/-
Maidstone	1/4	1/-
Malvern	1/4	1/-
Manchester	1/5½	1/1¼
Manningtree	1/2	10½
Mansfield	1/5½	1/1¼
March	1/2½	11
Margate	1/3	11¼
Market Harborough	1/4½	1/0½
Matlock	1/4	1/-
Melton Constable	1/1½	10¼
Melton Mowbray	1/4½	1/0½
Merthyr Tydfil	1/5	1/0¾
Middlesbrough	1/5½	1/1¼
Middleton	1/5½	1/1¼
Middlewich	1/4½	1/0½
Milford Haven	1/3½	11¾
Morecambe	1/5½	1/1¼
Morley	1/5½	1/1¼
Mundesley	1/2½	11
Nantwich	1/4½	1/0½
Newark-on-Trent	1/4½	1/0½
Newbury	1/3	11¼
Newcastle-on-Tyne	1/5½	1/1¼
Newcastle-u.-Lyme	1/5½	1/1¼
New Forest	1/2½	11
Newmarket	1/3½	11¾
Newport, Mon.	1/5½	1/1¼
Newport Pagnell	1/2½	11
Northampton	1/5½	1/1¼
Norwich	1/5	1/0¾
Nottingham	1/5½	1/1¼
Nuneaton	1/5½	1/1¼
Oakham	1/4	1/-
Oldham	1/5½	1/1¼
Ormskirk	1/5½	1/1¼
Oxford	1/5	1/0¾
Oxted	1/2½	11
Paignton	1/5	1/0¾
Peterborough	1/5	1/0¾
Plymouth	1/5½†	1/1¼
Pontypridd	1/5	1/0¾
Portsmouth	1/4½	1/0½
Port Talbot	1/5½	1/1¼
Preston	1/5½	1/1¼
Pulborough	1/2	10½
Ramsgate	1/3	11¼
Reading	1/4½	1/0½
Redcar	1/5½	1/1¼
Redditch	1/4½	1/0½
Redhill	1/3½	11¾
Reigate	1/3½	11¾
Retford	1/4	1/-
Ripon	1/4	1/-
Rochdale	1/5½	1/1¼
Rochester	1/4	1/0
Rugby	1/5½	1/1¼
Saffron Walden	1/2	10½
St. Albans	1/5	1/0¾
St. Helens	1/5½	1/1¼
St. Neots	1/2½	11
Salisbury City	1/2½*	11
Salisbury Plain	1/2½*	11
Sawbridgeworth	1/3½	11¼
Saxmundham	1/1½	10¼
Scarborough	1/5	1/0½
Selby	1/5½	1/1¼
Sevenoaks	1/4	1/-
Sheerness	1/3	11¼
Sheffield	1/5½	1/1¼
Shipley	1/5½	1/1¼
Shoeburyness	1/5	1/0¾
Shoreham	1/4	1/-
Shrewsbury	1/4½	1/0½
Sittingbourne	1/2½	11
Skegness	1/4½	1/0½
Sleaford	1/4	1/-
Slough	1/4½	1/0½
Southampton	1/4½	1/0½
Southend on Sea	1/5	1/0½
Southport	1/5½	1/1¼
South Shields	1/5½	1/1¼
Spalding	1/3	11¼
Stafford	1/5	1/0½
Staines	1/4½	1/0½
Stamford	1/4	1/-
Stevenage	1/4	1/-
Stockport	1/5½	1/1¼
Stockton-on-Tees	1/5½	1/1¼
Stoke-on-Trent	1/5½	1/1¼
Stourbridge	1/5	1/0½
Stourport	1/4½	1/0½
Stowmarket	1/2	10½
Stratford-on-Avon	1/4	1/-
Stroud	1/4†	1/-
Sunderland	1/5½	1/1¼
Sutton Coldfield	1/5½	1/1¼
Swaffham	1/1½	10½
Swanage	1/3½*	11¼
Swansea	1/5½	1/1¼
Swindon	1/4*	1/-
Tamworth	1/5	1/0½
Taunton	1/3½	11¼
Tenterden	1/2½	11
Tewkesbury	1/4*	1/-
Thetford	1/2	10½
Thorpe Bay	1/5	1/0½
Todmorden	1/5½	1/1¼
Tonbridge	1/4	1/0
Torquay	1/5	1/0½
Totnes	1/3½†	11¼
Trowbridge	1/2½*	11
Truro	1/2½	11
Tunbridge Wells	1/4	1/-
Uppingham	1/4	1/-
Uttoxeter	1/4	1/-
Wakefield	1/5½	1/1¼
Walsall	1/5½	1/1¼
Walsden	1/5½	1/1¼
Walton-on-Naze	1/3½	11¼
Ware	1/4½	1/0½
Warminster	1/2½*	11
Warrington	1/5½	1/1¼
Warwick	1/5	1/0½
Wellingborough	1/5	1/0½
Wells (Norfolk)	1/1½	10¼
Welwyn	1/4½	1/0½
Welwyn Gar.City	1/5½	1/1¼
West Bromwich	1/5½	1/1¼
Westcliff-on-Sea	1/5	1/0½
Weston-super-Mare	1/4½	1/0½
Weybridge	1/4	1/-
Weymouth	1/3*	11¼
Whitby	1/4½	1/0½
Whitstable	1/3	11¼
Widnes	1/5½	1/1¼
Wigan	1/5½	1/1¼
Wigton	1/4	1/-
Wellington	1/5	1/0½
Wilmslow	1/5½	1/1¼
Winchester	1/3½	11¼
Windermere	1/4	1/-
Windsor	1/4½	1/0½
Wisbech	1/2½	11
Witham	1/3½	11¼
Woking	1/3½	11¼
Wokingham	1/3½	11¼
Wolverhampton	1/5½	1/1¼
Woodbridge	1/2½	11
Worcester	1/4½	1/0½
Workington	1/4	1/-
Worksop	1/4½	1/0½
Worthing	1/3	11¼
Wrexham	1/5	1/0½
Wroxham	1/3	11¼
Wycombe	1/4	1/-
Wymondham	1/2	10½
Yeovil	1/3½*	11¼
York	1/5½	1/1¼

* Painters, 1d. less than other Craftsmen. † Painters, ½d. less than other Craftsmen. ‡ Plasterers, 1s. 8d.

For Building Trade Wages in Scotland, see page 251.

CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender, unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

FEBRUARY 4.

Ayrsham (Norfolk).—Erection.—Of 5 pairs houses and 2 pairs bungalows in various parishes, for R.D.C. Clerk. Dep. 10s.

Blackpool.—Convenience.—Underground, on Promenade, opposite Waterloo-rd., for C.B. B.S. Dep. £2.

Bridlington.—Painting.—Of exterior woodwork of Town Hall, for T.C. Borough Architect.

Bury.—Internal Decoration.—Of second-class plunge baths and superintendent's house at baths, St. Mary's-place, for T.C. B.E., Bank-st. Dep. 10s.

Dundee.—Extensions.—At Rockwell primary school, Lawton-rd., for E.C. J. A. F. Morrison, City Quantity S., 21, City-sq.

Eccles.—Additions.—And alterations to secondary school, for Lancashire C.C. Stephen Wilkinson, F.R.I.B.A., County Architect, County Offices, Preston. Dep. £2.

Gloucester.—Erection.—Of house and office at Lydney, for C.C. E. S. Sinnott. Dep. £2 2s.

Heanor.—Erection.—Of 12 houses at junction of Hands-rd. and Holbrook-st., and one pair bungalows off Holbrook-st., Langley, for U.D.C. R. Archer, E. and S. Dep. £1 1s.

Kimberley.—School.—At Newdigate-lane, for Notts C.C. County Architect, Shire Hall, Nottingham. Dep. £2 2s.

Liskeard.—Repairing.—And painting exterior of Webb's Hotel. H. R. Venning, L.R.I.B.A., architect and surveyor, Midland Bank-chams.

Newcastle-on-Tyne.—Erection.—And maintenance for six months of administration building, hangar and ancillary works on site of Municipal Aerodrome at Woolsington, for T.C. Hetherington & Wilson, architects, County-chambs., 62, Westgate-rd.

Norwich.—Sub-station.—At St. John's-rd., Stalham, for T.C. City E. Dep. £1 1s.

Ogwen.—Houses.—13, on site abutting Beulah Chapel, Penrhosgarnedd, nr. Bangor, for R.D.C. Ernest Roberts, clerk, Tanyfynwent Offices, Bangor. Dep. £1 1s.

***Plymouth.**—Alterations.—To Frederick-st. school, for T.C. City Architect, Rowe-st. Dep. £2 2s.

Portsmouth.—External Painting.—Of workshops for the blind, Northern-rd., Cosham, and external painting of shop, 182, Fratton-rd., for T.C. City E.

Rugby.—Houses.—5, at Clifton-on-Dunsmore, for R.D.C. S. Dep. £2 2s.

Slough.—Cottages.—8 small cottages for aged persons, Meadfield housing estate, Langley, for U.D.C. E. and S.

Stapleford.—Alterations.—And additions to Church-st. school, for Notts C.C. County Architect, Shire Hall, Nottingham. Dep. £1 1s.

Taunton.—Cottages.—36, at Leycroft-rd., and Hamilton-rd., for T.C. H. S. W. Stone, F.R.I.B.A., Lloyds Bank-chams., Fore-st. Dep. £2 2s.

Tiverton.—Houses.—20, at Broad-lane, for T.C. Capt. W. H. Duncan Arthur, B.S. Dep. £5.

Warrington.—Installation.—Of heating system at 'bus garage in Lower Bank-st., for T.C. B.S. Dep. £2 2s.

Warrington.—Sub-station.—In Barbauld-st., for T.C. J. Y. Hughes, B.E. and S. Dep. £2 2s.

Wednesfield.—Construction.—Of concrete walls, piers and gates fronting to housing estates at Amos-lane, Tithe-rd., and Wood End-rd., for U.D.C. A. H. Lawrence, S. Dep. £2 2s.

Wigan.—Erection.—Of new buildings for grammar school, for C.B. Alan E. Munby, 9, Old-square, Lincoln's Inn, London, W.C.2.

Willenhall.—Workshops.—And office at depot, Bow-st., for U.D.C. G. A. Waite. Dep. £2 2s.

FEBRUARY 5.

Aberdeen.—Block.—For female patients and block for senile patients at Royal Mental Hospital, for directors. J. B. Nicol, architect, 367, Union-st.

Ballycurragh.—Houses.—3, for Irish Land Commission. M. Deegan, secretary, Upper Merrion-st., Dublin Dep. £1

Chester.—Erection.—Of 228 houses in connection with Lache Housing Scheme, for T.C. Chas. Greenwood, E. and S., 43, Northgate-st. Dep. £2 2s.

Lymington.—Building.—Fire station in Gore-rd., New Milton, and depot buildings, in Manor-rd., New Milton, for T.C. B.E.

Prescot.—Conveniences.—At recreation ground and Grosvenor-rd., for U.D.C. F. A. Gregson, S. Dep. £1.

Yorkshire.—Painting Works.—At various county poor law institutions, for West Riding C.C. J. Charles McGrath, clerk, County Hall, Wakefield.

FEBRUARY 6.

Brighton.—Electricity Sub-station.—At Parkway, Southwick, for T.C. W. N. C. Clinch, "Electric House," Castle-sq. Dep. £2 2s.

***Chesterfield.**—Erection.—Of new municipal buildings at Rose-hill, for T.C. J. L. Feather, T.C. Dep. £5.

Dawley.—Houses.—14 three-bedroom and 2 four-bedroom type, on Paddock site, for U.D.C. J. H. T. Hickman, F.I.A.A., 1, Market-st., Wellington. Dep. £2 2s.

***Essex.**—Erection.—Of 7 police houses at Epping, 3 at Canvey Island and 3 at Stanford-le-Hope, for C.C. Jno. Stuart, F.R.I.B.A., Chelmsford. Dep. £1 1s. in each case.

***Essex.**—Additions.—To house block and erection of lift shaft at Maldon institution, for C.C Jno. Stuart, F.R.I.B.A., Chelmsford. Dep. £1 1s.

Exmouth.—School.—For Devon County E.C. H. V. de Courcy Hague, County Architect, 93, Heavitree-rd., Exeter. Dep. £2 2s.

Glasgow.—Painter Work.—At 6 district libraries, for T.C. Office of Public Works, City Chambers (Room 81).

Goole.—Alterations.—And additions to "North Eastern hotel." Pennington, Hustler & Taylor, architects and surveyors, Pontefract

Liverpool.—Electric Sub-station.—At Park-la., Netherton, Aintree, for T.C. Land Steward and Surveyor.

Portland.—Convenience.—At Weston, Portland, for U.D.C. R. Davidson, E. and S.

Repton.—Houses.—5 pairs, at Coton-in-the-Elms, for R.D.C. R. S. Litherland, L.R.I.B.A., 10, High-st., Burton-on-Trent. Dep. £1 1s.

Sutton Coldfield.—Alterations.—To Council House, for T.C. P. Parr, B.E. and S.

Wincanton.—Houses.—8, at Bruton, for R.D.C. H. N. Alves, architect, 27, High-st., Glastonbury. Dep. £2 2s.

FEBRUARY 7.

Alton.—Painting.—Exterior of assembly rooms and institute, for U.D.C. G. H. Webb, S

Castle Ward.—Houses.—46, at Hazlerigg, for R.D.C. James Janneson, sanitary surveyor, Fernlea, Ponteland. Dep. £3 3s.

Esher.—Mortuary.—Off Brooklands-rd., Thames Ditton, for U.D.C. E. and S. Dep. £1.

***Kent.**—Painting.—And repairs and minor works at certain school premises during period from April 1, 1935-March 31, 1936, for E.C. W. H. Robinson, F.R.I.B.A., Springfield, Maidstone.

Manchester.—Interior Painting.—Of Crumpsall Open-air School, Middleton-rd., Higher Crumpsall, for T.C. S.

Nottingham.—Houses.—16, and 24 flats on Colwick-st. area, for T.C. Housing Architect, Exchange-bldgs. East. Dep. £1.

Ryde.—Houses.—8 pairs, on site of old isolation hospital, Smallbrook-lane, for T.C. B.S., 5, Lind-st.

Sheffield.—Extensions.—To R.C. Schools, Sheffield-la. Top. Fox & Hill, Union-st., Dewsbury.

Wetherby.—Houses.—4, at Long Marston, for R.D.C. A. Suttel, architect, 18, Raglan-st., Harrogate. Dep. £1 1s.

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FEBRUARY 8.

Dublin.—Branch Libraries.—3, at Drumcondra, Inchicore and Ringsend, for T.C. City Treasurer, Exchange Buildings, Lord Edward-st. Dep. £3 3s.

St. Ives (Hunts).—Houses.—22, in Warboys, for R.D.C. W. A. Lee, architect, 4, Market-pl., Huntingdon. Dep. £1 1s.

Southend-on-Sea.—External.—Cleaning and painting and other works at Palmoira Parade Properties, for C.B. R. H. Dyer, B.E. Dep. £1.

Stratford-on-Avon.—Electric Light.—Of 11 Council houses, for R.D.C. H. J. Weeks, S., 11, Guild-st.

Whitehaven.—Alterations.—To public baths and washhouses, for C.B. B.E. and S. Dep. £1 1s.

FEBRUARY 9.

Bude.—Extensions.—And alterations to Bude and Stratton Cottage hospital, for Committee. Andrew & Randell, architects, New Inn-chams., St. Austell.

Dunmow.—Houses.—6, at Takeley, and 2, at High Roding, for R.D.C. A. E. Floyd, clerk. Dep. £1 1s.

Kingussie.—Houses.—4, for T.C. A. Cattanach, architect.

Liverpool.—Hacking-out.—And cementing walls in maternity block, Smithdown-rd. hospital, for T.C. Land Steward and Surveyor.

***Manchester.**—Extensions.—To town hall, for T.C. T.C. Dep. £10 10s.

FEBRUARY 11.

Beattock.—Telephone Repeater Station.—For H.M.O.W. Architect, H.M. Office of Works, 122, George-st., Edinburgh. Dep. £1 1s.

Bedford.—Erection.—Of garage at head P.O., for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

Dublin.—School.—At Inchicore, for Very Rev. Daniel Collier, O.M.I., Superior. Ashlin & Coleman, architects, 7, Dawson-st., Dublin. Dep. £3 3s.

Durham.—Additions.—And alterations to Auckland Park school, for C.C. F. Willey, F.R.I.B.A.

Durham.—Erection.—Of Burnhope new school, for C.C. F. Willey, F.R.I.B.A.

***Ealing.**—Erection.—Of 24 houses in connection with Greenford-rd. scheme, for B.C. F. J. Forty, B.E. Dep. £1.

Falmouth.—Residence.—At Spernen Wyn-rd. Alfred J. Cornelius, F.R.I.B.A., architect, Truro.

Leeds.—Erection.—Of Assembly Hall on Meanwood Housing Estate, for T.C. T.C., Room 57. Dep. £2.

Leeds.—Houses.—4, for medical practitioners, on Gipton housing estate, for T.C. R. A. H. Livett, Housing Director, 26, Great George-st. Dep. £2.

***Norfolk.**—Erection.—Of two low grade blocks at Little Plumstead Hall, for C.C. Edward Boardman & Son, Queen-st., Norwich. Dep. £2 2s.

Northampton.—Houses.—29, at Lower Heyford, and Duston, for R.D.C. R. J. Miller, S., 20, The Millway, Duston. Dep. £2 2s.

Northfleet.—Pavilion.—In Wombwell-pk., for U.D.C. G. E. Clay, A.R.I.B.A., 198, Parrock-st., Gravesend. Dep. £3.

Troon.—Houses.—52, in Kennedy and Harbour-rds., for T.C. B.S. Dep. £1 1s.

Worsley.—Houses.—26, and 12 bungalows, off Walkden-rd., for U.D.C. E. and S. Dep. £2 2s.

FEBRUARY 12.

***Bedford.**—Erection.—Of elementary school at Dunstable, for C.C. Oswald P. Milne, F.R.I.B.A., 64, Wigmore-st., W.1. Dep. £2 2s.

Essex.—Erection.—Of Senior School at Sawyer's-lane, Brentwood, for C.C. J. Stuart, F.R.I.B.A. Dep. £2 2s.

***Essex.**—Additions.—And alterations to Leyton county high school for Boys, for C.C. Jno. Stuart, F.R.I.B.A., Chelmsford. Dep. £1 1s.

***Gateshead.**—Erection.—Public shelter and convenience, at Wrekenton, for C.B. B.E. Dep. £2 2s.

Glanford, Brigg.—Houses.—20, at Burton-on-Stather, for R.D.C. G. W. Foster, Housing Surveyor. Dep. £2 2s.

Oxford.—Erection.—Of Cowley and Iffley junior and infants' school, for E.C. H. F. Hurcombe, architect. Dep. £2 2s.

Wardle.—Offices.—In Wardle-rd., Rochdale, for U.D.C. Butterworth & Duncan, architects, 2, Baillie-st. Dep. £2 2s.

FEBRUARY 13.

Ashby-de-la-Zouch.—Houses.—3 pairs, including well and pump, drainage and electric light services, existing houses in Appleby Magna, for R.D.C. Goddard & Wain, L.R.I.B.A., Station-chams., High-st., Coalville. Dep. £1 1s.

Birmingham.—Erection.—Joint postal and engineering garage, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

Surrey.—Reconstruction.—Of kitchen and stores dept. at Brookwood mental hospital, nr. Woking, for C.C. F. J. Hodgson, L.R.I.B.A., 201, High-st., Guildford. Dep. £1 1s.

FEBRUARY 14.

***Derby.**—Erection.—Of 17 houses, for C.B. C. H. Aslin, F.R.I.B.A. Dep. £1 1s.

***Edmonton.**—Houses.—25, at Hertford-rd., together with foul and service water sewers, for U.D.C. E. Dep. £2 2s.

Yeovil.—Houses.—6, at Yeovil Marsh, for R.D.C. Petter & Warren, FF.R.I.B.A., Old Sarum, Yeovil.

FEBRUARY 15.

Cork.—Canteen.—And stores at Kilworth Camp, for Commissioners of Public Works. T. Cassedy, Office of Public Works, Dublin. Dep. £1.

Swadlincote.—School.—At Midway, for Derbyshire C.C. George H. Widdows, County Architect, County Offices, Derby. Dep. £2 2s.

***Workington.**—Various Trades.—In connection with erection of 40 houses, Salterbeck site, and 60 houses, Frostoms site, for T.C. J. Penman, B.S.

FEBRUARY 16.

East Garforth.—Conversion.—Of offices at Council school, for West Riding E.C. H. W. Powell, Education Offices, Garforth, Leeds.

Haverfordwest.—Houses.—2 pairs, at Dale, for R.D.C. D. Frank Ingleton, F.R.I.B.A., 9, Victor-pl.

Northwich.—Houses.—46, on Danefield housing estate, for U.D.C. F. L. James, A.M.I.C.E. Dep. £2 2s.

✱**Southampton.**—Erection.—Secondary school, at Farnborough, for C.C. County Architect, Winchester. Dep. £1 1s.

Surbiton.—Erection.—Of 82 houses, Lower Marsh-lane, for U.D.C. H. T. Mather, E. and S. Dep. £2 2s.

Wednesbury.—Wiring.—Of 370 houses (148 now in course of erection and 222 about to be erected) at Dangerfield-lane site and Crankhill-lane (West) site, for T.C. Arthur Booth, L.R.I.B.A., B.S. Dep. £1 1s.

FEBRUARY 18.

Birkenhead.—Extension.—To filter house at Alwen Waterworks, near Cerrig-y-druidion, for T.C. R. F. Baker, Water Engineer, 601, Borough-rd. Dep. £2 2s.

Chichester.—Houses.—6, at Singleton, for R.D.C. Leonard Bailey, clerk. Dep. £1 1s.

Lancing.—Erection.—Of public convenience and reinforced concrete shelter at "The Dip," Brighton-rd., also convenience at recreation ground, Boundstone-lane, Sompting, for Parish Council. Clerk. Dep. £2 2s.

Liskeard.—Houses.—14, at Park View, for T.C. H. R. Venning, L.R.I.B.A., architect and surveyor, Midland Bank-chams.

✱**Manchester.**—Supplying.—Bricks for 12 months, for T.C. T.C.

✱**Paignton.**—Erection.—Of tea house, public convenience, boat house and chair store in Goodrington Park, for U.D.C. E. and S., 23, Totnes-rd. Dep. £3 3s.

Sleaford.—Houses.—72, at Lincoln-rd., for U.D.C. S. F. Clare, S. Dep. £2 2s.

Wakefield.—Hall.—And schools in Thornes-rd., Lupset, in various trades. H. A. Hosking, Haddon Leys, Manygates Park, Wakefield. Dep. £1 1s.

FEBRUARY 19.

Athlone.—Post Office.—For Commissioners of Public Works. T. Cassedy, Office of Public Works, Dublin. Dep. £1.

FEBRUARY 20.

Bangor.—Houses.—For water bailiff at Bethesda, for T.C. B. Price Davies, L.R.I.B.A. Dep. £2 2s.

Deptford.—Erection.—Of entrance gates and piers, etc., at new cemetery site, Marvels-lane, Grove Park, S.E.12, for B.C. B.E. and S., New Cross, S.E.14. Dep. £1 1s.

Kildare.—Married Officers' Quarters.—At Curragh Camp, for Commissioners of Public Works. T. Cassedy, Office of Public Works, Dublin. Dep. £1.

FEBRUARY 21.

✱**Huntingdon.**—Extension.—To Kimbolton grammar school, for C.C. Thos. H. Longstaff, County Architect. Dep. £2 2s.

FEBRUARY 23.

✱**Gloucester.**—Supply.—And erection of outside iron fire-escape stairs at Wotton hospital, for City Mental Hospital. Clerk of Works, Wotton M.H.

FEBRUARY 25.

Rochester.—Repainting.—Of bridge, and for various ancillary works, for Wardens. C. L. Howard Humphreys, Bridge Engineer, 17, Victoria-st., Westminster, S.W.1.

FEBRUARY 27.

✱**Stockton-on-Tees.**—Erection.—Of Newham Grange Senior School, for T.C. Geo. P. Stainsby, A.R.I.B.A., 25, High-st. Dep. £2 2s.

MARCH 1.

✱**Carlisle.**—Erection.—Of residences for Deputy Medical superintendent and 2 houses for officers, for Joint Mental Hospital, Garlands. H. E. Ayris, architect, 68, Lowther-st. Dep. 10s. 6d.

MARCH 7.

✱**Chailey.**—Erection.—Of 48 houses in various districts, for R.D.C. R. P. Cheale, Lewes. Dep. £2 2s.

NO DATE.

Maidenhead.—Outside Painting.—Redecoration and minor alterations to St. Edmonds, Ray Mill-rd., for Berkshire C.C. H. J. C. Neobard, clerk, Shire Hall, Reading.

MATERIALS, etc.

FEBRUARY 4.

Friern Barnet.—Road Materials.—For U.D.C. J. M. Gameson, E. and S.

Ilford.—Highway Materials.—For T.C. L. E. J. Reynolds, B.E. and S.

Ilkeston.—Broken Granite.—For T.C. B.S.

Melton Mowbray.—Tarmacadam.—For U.D.C. W. H. Jarvis, S., Egerton Lodge.

Middlesex.—Tar Emulsion.—And bitumen, for C.C. C.E., Middlesex Guildhall, Westminster, S.W.1.

Middlesex.—Road Stone.—For C.C. C.E., Middlesex Guildhall, Westminster, S.W.1.

Westmorland.—Tar, etc.—For C.C. A. S. Glover, C.S., 12, Lowther-st., Kendal.

FEBRUARY 5.

Merioneth.—Road Materials.—For C.C. H. E. Davies, C.S., Dolgelley.

St. Germans.—Roadstone.—For R.D.C. R. L. Bailey, S.

FEBRUARY 6.

Clacton.—Highway Materials.—For U.D.C. W. Aiston, S.

Hayes.—Bricks.—For U.D.C. A. E. Higgins, deputy clerk.

London.—Road Materials.—For H.M.O.W. Contracts Branch, King Charles-st.

Reigate.—Road Materials.—For T.C. B.S.

FEBRUARY 7.

Coulsdon and Purley.—Granite Chippings.—For U.D.C. E. and S.

Sutton Coldfield.—Chippings.—For T.C. P. Parr, B.E. and S.

FEBRUARY 9.

Cheadle and Gatley.—Road Materials.—For U.D.C. J. Wrest, E. and S.

Horsforth.—Granite.—For U.D.C. S.

Long Eaton.—Road Materials.—For U.D.C. H. Raven, E. and S.

Mansfield.—Highway Materials.—For T.C. B.E. and S.

ENGINEERING, IRON AND STEEL.

FEBRUARY 4.

Wickford.—Reconstruction.—Of Nevendon bridge, over river Crouch, on Nevendon-Wickford-rd., for Essex C.C. Robt. H. Buckley, C.S., Old Court, Chelmsford. Dep. £2 2s.

FEBRUARY 8.

Caistor.—Towers.—60,000 lin. yds. of cast-iron mains and reinforced concrete water towers and reservoirs, for R.D.C. J. H. Haiste, consulting engineer, Middleton-chambs., Lowgate, Hull. Dep. £5.

Melton (Suffolk).—Engineering Works.—In connection with St. Audry's Hospital, for Committee. Cecil Oakes, clerk, County Hall, Ipswich.

FEBRUARY 11.

Belfast.—Widening.—Of Forth River bridge, Ballygomartin-rd., and ancillary works, for T.C. City S. (Engineering Section), Room 94, City Hall. Dep. £1 1s.

Yarnton.—Reconstruction.—Of canal bridge on Oxford-Stratford-on.Avon-rd., for Oxfordshire C.C. G. T. Bennett, C.S., 8, New-rd.

FEBRUARY 14.

Reading.—Reconstruction.—Of Factory bridge, for C.B. L. G. Mouchel & Partners, Ltd., 36, Victoria-st., S.W.1. Dep. £2 2s.

Sherburn Hill.—Railway Bridge.—For Durham C.C. C.E. and S., 43, Old Elvet, Durham.

FEBRUARY 16.

Solihull.—Reconstruction.—Of Richmond-rd. canal bridge, for U.D.C. R. Dunn, E. and S. Dep. £3 3s.

FEBRUARY 18.

Deudraeth.—Sewerage.—At Penrhydeudraeth, for R.D.C. S. L. Richards, E., 5, Dumfries-pl., Cardiff. Dep. £2 2s.

MARCH 26.

Calcutta.—Construction.—Of new Howah Bridge, for Commissioners. Rendel, Palmer & Tritton, consulting engineers, 55, Broadway, Westminster, London, S.W.1.. Dep. £45.

ROAD, SEWERAGE AND WATER WORKS.

FEBRUARY 4.

Carmarthen.—Making-up.—And completion of carriageway and footpaths in Saint Non's-av. and extension of Saint David's-av., for T.C. G. L. Ovens, B.E. Dep. £1 1s.

Leyland.—Pipes.—8 miles of pipes, service reservoir and other works, for U.D.C. J. Owen Parry, consulting civil engineer, Ammanford.

Middlesex.—Maintenance.—Of county roads for year ending March 31, 1936, for C.C. C.E., Middlesex Guildhall, Westminster, S.W.1.

Seaford.—Making-up.—Portion of Arundel-rd., for U.D.C. E. A. Lister, S.

Sunbury-on-Thames.—Construction.—Of approximately 225 yds. lin. of road, on Green-lane housing site, for U.D.C. A. J. Buttress, acting surveyor. Dep. £2 2s.

Sutton-in-Ashfield.—Sewering.—Levelling, paving, metalling, flagging, channelling and making good, Coburn-st., for U.D.C. Walter Burn. Dep. £1.

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FEBRUARY 5.

Glasgow.—Road Construction Work.—At Bailieston-Glasgow-Edinburgh-rd. site, for Lanark C.C. P. C. Smith, County Housing and Town Planning Engineer, 13, Clydesdale-st., Hamilton.

Santry.—Laying.—327 yds. of sewer extension at St. Canice's-ter., for Dublin Board of Public Health. E. P. Russell, E., 15, Parnell-sq., Dublin. Dep. £3 3s.

Southgate.—Making-up.—Of Townsend-av., Willow-walk; The Birches and Holly Hill, for T.C. R. Phillips, B.S. Dep. £2.

FEBRUARY 6.

Kingston-upon-Thames.—Making-up.—Of St. Albans-rd., for T.C. B.S. Dep. £1 1s.

Kingston-on-Thames.—Widening.—Of Clarence-st., for T.C. B.S., 3 and 5, Thames-st. Dep. £2 2s.

Luton.—Making-up.—Of Chandos-rd. and Thornhill-rd., for T.C. J. W. Tomlinson, B.E. and S. Dep. £2 2s.

Manchester.—Sewering.—Draining, asphalting of footpaths to 22 houses on Barlow Moor-rd. housing estate, West Didsbury, for Housing Committee. City E. Dep. £1 1s.

Ross-on-Wye.—Roads.—And sewers, at Tudorville housing site, for U.D.C. C. H. Caddick, S.

FEBRUARY 7.

Draycott.—Levelling.—Paving, kerbing and tarmacadam surfacing, Victoria-av., for Derbyshire C.C. C.S. Dep. £1 1s.

Leeds.—Kerbing.—Flagging and tar macadamising carriageways in various private streets, for T.C. E. W. Cockerlyne, Highways Engineer, 155, Kirkstall-rd. Dep. £1 1s.

Newquay.—Construction.—Of sewers, manholes and appurtenant works at Trencreek, for U.D.C. C. W. Walters, E. and S. Dep. £3 3s.

FEBRUARY 9.

Harrow.—Widening.—And improving Marsh-rd., Pinner, and Pinner-rd., for U.D.C. J. Percy Bennetts, S. Dep. £3 3s.

Heston and Isleworth.—Reconstruction.—And resurfacing of part of Bath-rd. between Hounslow High-st. and Great West-rd., for T.C. J. G. Carey, B.E., Council House, Hounslow. Dep. £2 2s.

FEBRUARY 11.

Esher.—Laying.—About 220 yds. run of pipe sewer in Ember-lane, Thames Ditton, for U.D.C. E. and S. Dep. £1.

Rotherham.—Making-up.—Of Chesterhill-av., Thrybergh, for R.D.C. A. E. Lant, E. and S. Dep. £1 1s.

Walton and Weybridge.—Making-up.—Of Ashley Park-rd. and Claremont-av., for U.D.C. E. and S. Dep. £1 1s. each.

Ware.—Laying.—Of about 1,400 yds. of 7-in. and 6-in. cast-iron water mains, at Standon, for R.D.C. D. Balfour & Sons, civil engineers, 47, Victoria-st., Westminster, S.W.1. Dep. £3.

FEBRUARY 12.

Chadderton.—Widening.—Of Middleton-rd., for U.D.C. S. Dep. £1 1s.

Grays Thurrock.—Making-up.—Of Victoria-ave., Grays, for U.D.C. H. S. Goodall, E. and S. Dep. £2 2s.

Southall-Norwood.—Widening.—Of Western-rd., for U.D.C. J. B. Thomson, E. and S., Town Hall, Southall. Dep. £2 2s.

Sutton and Cheam.—Making-up.—Of two roads, for T.C. N. H. Michell, B.E. and S. Dep. £1 1s.

FEBRUARY 13.

Coulsdon and Purley.—Making-up.—Of Riddlesdown-av., Sanderstead, for U.D.C. E. C. King, clerk. Dep. £1 1s.

Twickenham.—Sewering.—Forming, levelling, kerbing, paving, concreting and making good Ellesmere-rd., for T.C. G. R. King, B.E. Dep. £1 1s.

FEBRUARY 16.

Romford.—Making-up.—Of Links-av. and Hockley-drive, for U.D.C. E. and S. Dep. £1 1s.

Public Appointments.

FEBRUARY 4.

Fulham.—Working Foreman Painter.—For B.C. T.C.

Manchester.—Quantity Surveying Assistant (Temporary).—For T.C. Housing Director.

Manchester.—Architectural Assistant (Temporary).—For T.C. Housing Director.

Middlesbrough.—Architectural Assistant (Temporary).—For E.C. S. Moffatt, Director of Education.

FEBRUARY 7.

Great Britain.—Civilian Garrison Engineers (Temporary).—For Establishment for Engineers' Services at Army Stations. Under-Secretary of State (C.5), War Office, London, S.W.1.

Surrey.—Architectural Assistant.—For C.C. Dudley Aukland, Clerk, Kingston-upon-Thames.

FEBRUARY 8.

Gravesend.—Assistant Clerk of Works.—For T.C. T.C.

FEBRUARY 9.

Southampton.—Clerk of Works.—For C.B. Secretary.

Southgate.—Architectural Assistant (Temporary).—For B.C. T.C., Palmers Green, N.13.

FEBRUARY 11.

✱**Acton.**—Building Inspector.—For B.C. W. G. Cross, B.E.

FEBRUARY 16.

Durham.—Assistant Architect.—For C.C. F. Willey, F.R.I.B.A.

FEBRUARY 18.

✱**Finsbury.**—General Assistant.—For B.C. T.C., Rosebery-av., E.C.1.

✱**Nottingham.**—Clerk of Works.—For River Trent Catchment Board. John Hirst, clerk.

CURRENT & PROPOSED BUILDING WORK*

Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.W.B. for Metropolitan Water Board; B.S. for Borough Surveyor; B.E. for Borough Engineer; D.S. for District Surveyor; C. for Clerk; T.C. for Town Clerk; C.E. for County Engineer; C.S. for County Surveyor; S. for Surveyor; E. for Engineer.

Ainwick.—The U.D.C. proposes 80 houses. M. T. Wilson, S.

Bakewell.—Board of Governors of Lady Manners' School proposing to erect new school buildings. Plans by G. H. Widdows, F.R.I.B.A., St. Mary's Gate, Derby.

Bedwellty.—Plans approved for assembly hall, Aberbargoed Workmen's Institute, for committee; and unemployed social centre at Blackwood, for Social Service Council

Beeston.—U.D.C. approved:—34 non-parlour houses at Boundary-rd. to rehouse persons who will be displaced under slum clearance scheme.

Billericay.—U.D.C. proposes new Council offices at £3,000, and conversion of old buildings at £500.

Birtley.—Scheme approved for public baths and washhouses, to cost £15,000. Plans by M. Wilson, U.D.C. Offices.

Bishop Auckland.—Additions and alterations to be made at Auckland Park School, at £5,000. F. Willey, architect, 34, Old Elvet, Durham.

Bradford.—F. H. & F. Chippendale, L. W. H. Lewis and J. Needham propose 100 houses at Reevey-rd. and Reevey-av.—J. C. Backhouse, 18, King's-arcade, preparing plans for development of land at Cross-lane, Tong, for housing estate, for C. Scott.

Brecon.—E.C. recommends central school, Crickhowell.

Broadstairs.—T.C. to erect bathing station, at £3,000

Brighton.—T.C. approved:—rebuilding garage, office and stores over 100, North-rd., Nicholls & Co. (Brighton), Ltd.

Bury.—Sunny Bank Estate Co., 31, King-st. West, Manchester, propose to develop land at Unsworth on garden city lines. Plans prepared by P. Cummings, A.R.I.B.A., architect, 27, King-st. West, Manchester.

Cambridge.—Borough E.C. approved revised plans for R.C. school, Union-rd.

Carlisle.—Buckland & Haywood, Norwich Unionchams., Congreve-st., Birmingham, prepared plans for two central schools for E.C. on Swifts-rd. site, at £50,000.

Carlton.—U.D.C. to submit to M.H. scheme for covered baths and washhouses.

Chippenham.—Swimming Club Committee to invite tenders for dressing-room at baths.

Coventry.—E.C. recommend £2,368 for purchase of land for additions to Frederick Bird school.

Cumberland.—C.C. invites tenders for secondary school at Millom; additions and improvements to head teacher's house at Council School at Newcastle Bailey, Roadhead; improvements and additions to head teacher's house, Council School, at Warwickeland, Penton. Plans by J. Forster, County Architect, 4, Alfred-st. North, Carlisle.—Standing Joint Committee recommends five police houses, at £4,500.

Darlington.—B.E. to prepare plans for lavatories at North Lodge-park.—It is proposed to start building a new church in St. Matthew's Parish, at £6,500. Rev. C. H. Beaglehole is vicar.

Denton.—Lancashire E.C. propose alterations and extensions of Russell Scott Council school. Plans by County Architect, S. Wilkinson, F.R.I.B.A. Tenders to be invited.

Dinnington.—Trustees of Mining and Technical Institute propose extensions. Estimated cost £5,450.

Docking.—R.D.C. to build new Council offices, etc., at £1,650.

Dun Laoghaire.—T.C. to request Minister for Local Government and Public Health to sanction loan of £76,000 to erect 200 houses in Dun Laoghaire, Dalkey and Blackrock areas.

Dursley.—Housing Committee to consider 200 houses at King's Hill.

Edmonton.—L.C.C. recommend £1,375 in respect of means of escape and fire precautionary works at Edmonton colony.

Glossop.—Very Rev. Canon W. Winder, of Church of St. Mary the Crowned, Sumner-st., proposes erection of new elementary school.

Gloucester.—E.C. proposes open-air school at Oak Bank, Dursley.

Goole.—T.C. approved in principle reconstruction and enlargement of public baths, Pasture-rd., at £11,000.

Guildford.—Housing Committee recommends 200 houses at Westborough.—Fire station costing £12,000 proposed adjoining by-pass road at Stoke.

Hoylake.—G. Fraser, F.R.I.B.A., Wellington-bldgs., The Strand, Liverpool, is architect for reconstruction of "Punch Bowl" Hotel, for West Cheshire Brewery Co., Ltd., Farm-rd., Birkenhead. Estimated cost £12,000.—J. Crosby & Sons, Ltd., Estate Office, Pownall Park, Wilmslow, proposes to develop Mere Hall Estate, Bucklow Hill, for housing site. Plans prepared for erection of 80 to 100 houses.

Jarrow.—T.C. approved schemes by B.E. for conveniences at junction of Railway-st. and Caroline-st. at £720, and at junction of Monkton Bank and Cemetery Bank at £500.

Leicester.—Royal Infirmary to build men's convalescent home, Charnwood Forest, at £34,000.—Health Committee contemplating new ward for 200 beds at Isolation Hospital, at £100,000.—E.D. are proposing completion of the Wyggeston Boys' School. Estimated cost £40,650. Plans by J. Miller, R.S.A., F.R.I.B.A., 15, Blythswood-sq., Glasgow 2.

London (Bermondsey).—L.C.C. sanctioned borrowing by B.C. of £53,730 acquisition of properties on Hylton-st., Risdon-st. and Renforth-st. clearance areas; £2,250 for Cherry Garden-st. clearance area; £2,300 and £750 for further site in Southwark Bridge-rd. for housing and £1,035 for property in Rotherhithe New-rd.

London (Lewisham).—B.C. approved:—H. H. Ward, Dartmouth-rd., block of flats.

London (St. Pancras).—L.C.C. sanctioned borrowing by B.C. of £19,000 for Ferdinand-pl. housing scheme.

London (Southwark).—B.C. received L.C.C. sanction to borrow £5,275 for Amery's-pl. and Kinglake-st. housing scheme.—B.C. to borrow £3,367 16s. for Bear-lane housing scheme.

London (Stepney).—B.C. approved: J. Arkus, lock-up shops rear of 232, Mile End-rd., abutting on Beaumont-st.

London (Wandsworth).—L.C.C. sanctioned borrowing by B.C. of £10,125 for site in Garratt-lane for housing purposes.

London (Westminster).—City Council recommend £150 for repairs to retaining wall and structure at Millbank-wharf. Council to purchase land adjoining Horseferry-rd. mortuary and Grosvenor housing estate.

Loughborough.—Council applying to M.H. for sanction to £13,056 for 42 houses, Ling estate.

Manchester.—Groves & Whitham, Ltd., Salford, to build hotel, to be known as "The Crescent Hotel," at Wellington-rd., Higher Crumpsall. Tenders to be invited.—Hydes Queen's Brewery, Ltd., Brookes Bar, propose hotel to be styled "The Gateway Hotel," at junction of Wilmslow-rd. and Kingsway Extension, East Didsbury. Tenders to be invited.—New R.C. Church of St. Patrick, Liversey-st., to be erected. Architect, H. Greenhalgh. Cost £34,000.

STUBBS
MARBLE
IS
BETTER
MARBLE

Middlesex.—C.C. approved agreement with L.M. & S. Rly. Co., in connection with reconstruction of bridge carrying railway over Cricklewood-lane, Hendon.—£180 to be spent by Council on fencing in Western-av.—Additional fencing at Yeoveney Manor estate, Staines, at £901 approved.

Minehead.—U.D.C. to apply to M.H. for sanction to loans for purchase of land on Front and for erection of a pavilion, conveniences, etc., thereon.

Nr. Kidderminster.—Proposals are under consideration for erection of mental defectives institution to cost £236,500. The development would be carried out jointly by Worcestershire C.C. and Burton, Dudley, Smethwick, Worcester and Wolverhampton T.C.s.

Newcastle-on-Tyne. — It is understood City Libraries Committee negotiating for further land near Church of Divine Unity for proposed library extensions.—Anglo-Scottish Trading Co., Ltd., to build factory in Sandyford-rd.

Nottingham.—Market and Fairs Committee considering slaughter-houses in Cattle Market.

Nuneaton.—T.C. proposes reservoir at Tuttle Hill.

Oldham.—Oldham Brewery Co., Ltd., Albion Brewery, Coldhurst-st., propose hotel at the junction of Uphills-rd. and Sixteenth-av.

Olney.—Bathing Place Committee to enlarge and improve bathing place, at £525.

Oxford.—Extensions to be undertaken at Morris Motor works, Cowley.

Pegswood.—Local British Legion agreed to club premises. A. Holborn is local chairman. Cost £1,700.

Radcliffe.—U.D.C. propose to erect approximately 200 houses for housing scheme for Dumerslane district. Plans by G. E. Wrigley, S., Council Offices.

Reading.—E.C. seeking site for school, Whitley estate.

Salford.—Plans being prepared by Harry S. Fairhurst & Son for blocks of flats (330 dwellings) which Sutton Dwellings Trust propose to erect on Ashfield estate in Eccles Old-rd. are in process of completion, and will be submitted for approval of Building and Development Committee in near future.

Sedgefield.—District Education Sub-committee propose practical room, Trimdon Grange mixed school.

Sheffield.—Parochial Council of St. Oswald's Church, Millhouses, are proposing erection of Parochial Hall. Estimated cost £3,000.

Shipley.—Catholic Authorities of St. Mary and St. Walburga Church propose erection of School for 250 scholars at junction of Carr-lane and Roseberry-av., Windhill.

Shrewsbury.—Worthington & Co., Ltd., High-st., Burton-on-Trent, propose erection of hotel at Whitchurch-rd. and Haughmand-rd. Plans by Fowler, Sandford & Potter, A.R.I.B.A., architects, 8, St. James-st., Sheffield. Contracts not let.

Skerton.—Licensee of Carpenter Arms, Bridge-lane, proposes new public-house, "The Loyne Arms Hotel," on Lune-Ville estate.

Southend-on-Sea.—C.B. approved:— 26 bungalows, Leighfields-av., Mr. J. Warner.

Startforth.—M.H. confirmed R.D.C.'s slum-clearance orders for Bridgend district.

Stockport.—T.C. propose 180 houses at Stockport-rd. site, Cheadle Heath. W. F. Gardner, B.S.

Stockton-on-Tees. — Electricity Committee proposes sub-stations at Norton, Hartburn, Eaglescliffe and at Durham-rd. recreation ground.

Stretford.—H. S. Fairhurst & Son, 55, Brown-st., Manchester, are architects for new building for Turner's Asbestos Cement Co., Trafford Park. Quantities not yet prepared.

Surrey.—E.C. to erect junior mixed and infants' school (384 places), Merton Park.

Sutton Coldfield.—Licensing Justices approved plans for rebuilding of "Fox and Dogs" public-house at Little Sutton, for Lichfield Brewery Co., Ltd. Architect is B. J. Barnes, Bore-st., Lichfield. —T.C. approved plans for new "Hare and Hounds" Hotel in Slade-rd., for same brewery. Plans by A. T. and Bertram Butler, F. & A.R.I.B.A. Priory-rd., Dudley.

Tunbridge Wells.—A syndicate is preparing to spend £500,000 in erection of spa at Sherwood Park and extension of clinic in Sherwood Park.

Tynemouth.—E.C. to convert Royal Jubilee school premises into a juvenile instruction centre, at £1,160.

Urmston.—C. C. Riddings, 20, Denmark-rd., Whitworth Park, proposes hotel at Moorside-rd. and Bowfell-rd., Flixton.

Uttoxeter.—U.D.C. to include 29 more houses in slum-clearance scheme.

Walsall.—T.C. to spend £10,000 on three-story extension of Council House.

West Hartlepool.—Negotiations being carried on by T.C. for land on Tips estate and Middleton-rd. for housing purposes.

Winwick.—Proposed extension Lancs. County Mental Hospital. Cost £50,000.

Wombwell.—U.D.C. to seek M.H. sanction for loan for purchase of land between Summer-lane and Hough-lane, from Captain B. C. V. Wentworth and Sir Theodore Brinckman.

Wrexham.—Additional buildings to be built at cost of £16,000 for Denbighshire Technical Institute, to include dining hall, central hall and gymnasium, and several classrooms.

Yeovil.—R.D.C. proposes to acquire site for 28 houses at Stoke-under-Ham.—R.D.C. considering sewerage schemes costing £75,000 for 19 parishes.

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* See also List of Contracts open.

*** In these lists every care is taken to ensure that information given is accurate and up to date, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time prices of materials should be confirmed by inquiry.

PRINCIPAL ALTERATIONS OF THE WEEK.—Linseed Oil advances by 3d. per gallon; Lead goes up by 5s. per ton, except compo pipe (£1) and old lead (15s.).

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to Mortlake.

	£	s.	d.
Best Stocks	4	2	0
Second Hard Stocks	3	10	0

Per 1,000. Delivered at London Goods Stations.

	£	s.	d.		£	s.	d.
"Phorpres"	*2	8	3	Flettons, B'll'n'se	3	6	3
Flettons at King's Cross	*2	8	3	Best Blue Pressed Staffs	8	5	0
Do., grooved for Plaster	*2	10	3	Do. Bullnose	8	15	0
				Blue Wire Cuts	7	0	0

White Midhurst Facing Bricks (delivered London site) 5 0 0
"Phorpres" whites (King's Cross)..... *3 11 3
"Phorpres" Rustic Facings (King's Cross) *3 6 3
Best Stourbridge Fire Brick:—
2½ in. ..... 7 15 0 3 in. 8 15 0
* Delivered to site in W.C. district, 6s. extra per 1,000.

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretcher	21 0 0	D'ble Str'tch'rs	29 10 0
		D'ble Headers	26 10 0
Headers	20 10 0	One side and two Ends	30 10 0
Quoins, Bull-nose and 4½ in. Flats	27 10 0	Two sides and one End	31 10 0
		Splays and Squints	28 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

PARTITION SLABS.

Delivered London Area.

CLINKER CONCRETE.

2" per yd. sup.	1	6	3" per yd. sup	2	0
2½" " "	1	8	4" " "	2	4

CRANHAM TERRA COTTA.

2" per yd. sup.	3	0	3" per yd. sup.	3	8
2½" " "	3	6	4" " "	4	7

HEMPSTEAD—KEYED TWO SIDES.

12" × 9" × 2"	2	3	12" × 9" × 3"	2	9
12" × 9" × 2½"	2	6	12" × 9" × 4"	3	6

Per yard super d/d. Free on site, London.

	s.	d.	
Thames Ballast	7	3	per yd.
Pit Ballast	6	3	" "
Pit Sand	7	9	" "
Washed Sand	8	3	" "
¾ in. Shingle	7	3	" "
¾ in. Broken Brick	11	3	" "
Pan Breeze	8	3	" "

delivered 2 miles radius Paddington.

CEMENT.

Best British Portland Cement, Standard Specification, delivered London Area in jute sacks (11 to ton), or paper bags (20 to ton) free (non-returnable):—

	£	s.	d.
4 ton loads and upwards site..... Per ton.	2	0	0
1 ton to 4 tons site	2	2	0
Alongside Vauxhall in 80-ton lots.....	1	16	0
"Ferrocrete" Rapid Hardening Cement:—			
4 ton loads and upwards site.....	2	6	0
1 ton to 4 tons site	2	8	0
Alongside Vauxhall in 80-ton lots.....	2	2	0
"Colorcrete" Nos 1 and 2 Coloured Rapid Hardening Portland Cement in 1 cwt. paper bags free (non-returnable) in 1-ton lots and upwards site	3	6	0
"Snowcrete" White Portland Cement in 1 cwt. paper bags free (non-returnable) 1 ton and upwards site	8	15	0
Super Cement (Waterproof) paper bags free	3	10	0
Roman Cement	6	15	0
Parian Cement	5	15	0
Keene's Cement, White	5	15	0
" " Pink	5	10	0

NOTE.—Jute sacks are charged 1s. 6d. each and credited 1s. 6d. nett if returned in good condition within three months, carriage paid.

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d., if returned in good condition within three months carr. pd.

PLASTER.

	£	s.	d.
Plaster, Coarse, Pink	2	12	0
" " White	2	17	6
" Fine	5	0	0
Sirapite, Coarse	3	5	0
" Finish	3	13	0
Grey Stone Lime	2	2	0
Chalk Lime	2	2	0
Best Ground Blue Lias Lime	1	17	6
Hair..... per cwt.	2	2	6
Granite Chippings	1	12	0

Stourbridge Fireclay in sacks 37s. 0d. per ton at rly. dep.

STONE.

	s.	d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	2	10
BEER STONE—RANDOM BLOCK— Free on rail at Seaton Station, per ft. cube	2	3
Delivered free on rail Nine Elms, S.R. per ft. cube		1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.		
PORTLAND STONE— Brown Whitbed, in random blocks of 20ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4	4½
Do. do. delivered on road waggons at above stations, per ft. cube	4	5½
White basebed, 3d. per ft. cube extra.		
NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.		
HOPTON-WOOD STONE— F.O.R. Quarries Wirksworth, Derbyshire, Random blocks from 10ft. and over P.ft.cb.	s. 14	d. 0
Sawn two sides	22	6
Sawn, three or four sides	27	9
CHILMARK—RANDOM BLOCK— At Nine Elms, per ft. cube	3	11

YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station London.

6 in. sawn two sides landings to sizes (under 30 ft. super)	Per ft. super	5	6
6 in. rubbed two sides, ditto	"	6	0
2 in. sawn two sides slabs (random sizes)	"	2	3½
2 in. to 2½ in. sawn one side slabs (random sizes)	"	1	6½
1½ in. to 2 in., ditto	"	1	3½

HARD YORK—
Delivered at any Goods Station, London.

Scappled random blocks	Per ft. cube	6	3
6 in. sawn two sides landing to sizes (under 40 ft. super)	Per ft. super	5	1½
6 in. rubbed two sides, ditto	"	6	1½
4 in. sawn two sides slabs (random sizes)	"	3	1½
3 in. ditto ditto	"	2	8
2 in. self-faced random flags	Per yd. super	7	6

CAST STONE.

Delivered in London area in full van loads, per ft cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 0d.

SOFT WOOD.

GOOD BUILDING DEAL.

Inches.		Per stan.	Inches.		Per stan.
4 × 11	.....	£23 10	3 × 6	.....	£18 10
4 × 9	.....	22 10	3 × 11	.....	19 10
4 × 8	.....	21 0	2 × 11	.....	19 10
4 × 7	.....	19 0	3 × 9	.....	19 10
3 × 8	.....	17 10	2½ × 9	.....	19 10
3 × 7	.....	18 0	3 × 4½	.....	17 10
2½ × 7	.....	18 0	3 × 4	.....	17 10

PLANED BOARDS.

1 × 11	.....	£22 10	1 × 9	.....	£21 0

PLAIN EDGE FLOORING.

Inches.	per sq.
⅝	16/-
¾	17/-
1	19/-

TONGUED AND GROOVED FLOORING.

Inches.	per sq.
1	21/-
1¼	26/-
1½	32/6

ins. BATTENS.	s.	d.
¾ × 2 ..per 100 ft.	2	6

Inches.	per sq.
1½	25/-
1¾	31/6

MATCHING (BEST).

Inches.	per sq.
⅝	16/-
¾	18/6
1	22/6

SAWN LATHS.	s.	d.
Per bundle	2	3

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality.	£	s.	d.
Dry Austrian Wainscot, per ft. cube	0	15	0
Dry American and/or Japanese Figured Oak, per ft. cube	0	12	0
Dry American and/or Japanese plain Oak, per ft. cube	0	10	0
Dry sq. edged Honduras Mahogany, per ft. cube	0	14	0
Dry log-cut Honduras Mahogany, per ft. cube	0	16	0
Dry Cuba Mahogany, per ft. cube	1	1	0
Dry Teak, per ft. cube	0	14	0
Dry American Whitewood, per ft. cube	0	10	0
Best Scotch Glue, per cwt.	3	0	0
Liquid Glue, per cwt.	4 7 0 to 5 10 0		

HUDDERSFIELD Building Society

Ample funds are available to assist in house purchase. Builders with sound schemes of development are invited to consult with the Society.

Branches throughout the Country.

Write for the Folder "Mortgage Facilities" to The Huddersfield Building Society, Britannia House, 203, Strand, London, W.C.2, or from the Head Office, Britannia Buildings, Huddersfield. Andrew Stewart, C.A., Managing Director.

WHEN YOU INVEST—A HOUSE IS BEST!

SLATES.

First quality slates from Bangor or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£	s.	d.		£	s.	d.
24 by 12 ..	29	15	0	18 by 10 ..	15	12	6
22 by 12 ..	25	0	0	18 by 9 ..	13	15	0
22 by 11 ..	22	10	0	16 by 10 ..	13	10	0
20 by 12 ..	22	0	0	16 by 8 ..	10	7	6
20 by 10 ..	19	7	6				

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons.

	Per 1,000 f.o.r. London.		
Best machine-made tiles from Broseley or Staffordshire district	£4	7	0
ditto hand-made ditto	5	0	0
Ornamental ditto	5	8	6
Hip and valley tiles (per dozen) Hand-made	0	9	6
Hip and valley tiles (per dozen) Machine-made	0	9	0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

	£	s.	d.
R.S. Joists, cut and fitted	11	10	0
Plain Compound Girders	13	10	0
" Stanchions	16	0	0
In Roof Work	18	10	0

MILD STEEL ROUNDS.—To London Station, per ton.

Diameter.	£	s.	d.	Diameter.	£	s.	d.
¼ in.	12	0	0	⅝ in. to ½ in.	10	15	0
⅜ in.	11	0	0	⅝ in. to 2¾ in.	10	10	0

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Standard Wrot. Mild Steel Tubes and Tubulars Sizes ⅛in. to 6in.	Genuine Wrot. (Puddled) Iron Tubes and Tubulars Sizes ⅛in. to 6in.	Standard Fittings Sizes ⅛in. to 6in.	Standard Flanges Sizes ⅛in. to 6in.
	%	%	%	%
Gas	65	52½	57½	70
Water	61½	48½	52½	65
Steam	57½	45	47½	60
Galv. gas	52½	40	47½	60
Galv. water	47½	35	42½	55
Galv. steam	42½	30	37½	50

C.I. HALF-ROUND GUTTERS—London Price ex Works

Per yd. in 6 ft. lengths.	Gutters.	Angles and Stop Nozzles.	Stop Ends.
3 in.	1/5½	1/1½	4½d.
3½ in.	1/6½	1/3	5½d.
4 in.	1/6¾	1/4½	6¾d.
4½ in.	1/8	1/6½	9½d.
5 in.	1/10½	1/8½	10d.

O.G. GUTTERS.

3 in.	1/7½	1/5½	7d.
3½ in.	1/9½	1/5½	7½d.
4 in.	1/11	1/6½	8½d.
4½ in.	2/0	1/9½	9½d.
5 in.	2/4½	2/0½	11½d.

RAIN WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in.	2/2½	1/4½	2/0
2½ in.	2/3½	1/6½	2/4½
3 in.	2/9½	1/11	2/10½
3½ in.	3/3½	2/3½	3/3½
4 in.	3/9	2/9	4/0½

Less 20 per cent. trade discount.
Tonnage allowance—4 ton lots, 5 per cent.
2 ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices ex Stock.

	Pipe, s. d.	Bends, stock angles, s. d.	Branches, stock angles, s. d.
2 in. per yd. in 6 fts.	2 8	1 11	2 3
2½ in. "	3 0	2 1	2 10
3 in. "	3 4	2 3	3 5
3½ in. "	3 7½	2 10	3 11
4 in. "	4 0	3 2	4 6

L.C.C. COATED DRAIN PIPES—London Prices ex Stock.

	Pipe, s. d.	Bends, stock angles, s. d.	Branches, stock angles, s. d.
3 in. per yd. in 9 ft. lengths	3 0	4 6	7 0
	cwt. qr. lbs.		
4 in. "	1 1 20	4 9	5 6	8 9
5 in. "	1 2 22	5 10	9 6	13 6
6 in. "	2 0 6	6 10	12 0	18 0

Gaskin for jointing 41/- per cwt.

IRON—	Per ton in London. £ s. d.		£ s. d.
Common bars	10 0 0	to	10 10 0
Staffordshire Crown Bars— Good merchant quality	10 10 0	to	11 0 0
Staffordshire Marked Bars	14 0 0	..	15 0 0
Mild Steel Bars	9 0 0	..	10 0 0
Steel Bars, Ferro-Concrete quality, basis price	8 10 0	..	9 0 0
Hoop iron, basis price	11 0 0	..	12 0 0
" Galvanised	27 10 0	..	28 10 0

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS—(*contd.*).

Per ton in London.

	£ s. d.	£ s. d.
IRON—		
Soft Steel Sheets, Black—		
Ordinary sizes, to 20 g.	11 0 0 ..	11 10 0
„ „ „ 24 g.	12 0 0 ..	13 0 0
„ „ „ 26 g.	14 0 0 ..	15 0 0
„ „ „		
Sheets Flat Best Soft Steel, C.R. and C.A. quality—		
Ordinary sizes 6 ft. by 2 ft. to 3 ft. to 20 g. ..	14 0 0 ..	15 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	15 0 0 ..	16 0 0
Ordinary sizes, 6 ft. by 2 ft to 3 ft. to 26 g.	17 10 0 ..	18 10 0
No 1 quality £4 per ton extra.		
Flat and Galvanised Corrugated Sheets—		
Ordinary sizes, 6 ft. to 9 ft. to 20 g.	13 10 0 ..	15 0 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g...	15 10 0 ..	16 10 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	16 10 0 ..	18 0 0
Sheets, Galvanised Flat, Best quality—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	14 10 0 ..	16 10 0
Best Soft Steel Sheets, 22 g. and 24 g	15 0 0 ..	17 0 0
Best Soft Steel Sheets, 26 g.	16 10 0 ..	18 0 0
Cut Nails, 3 in. to 6 in.	15 10 0 ..	17 0 0
(Under 3 in. usual trade extras.)		

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

		s. d.
Seamless Copper tubes (basis)	per lb.	0 9
Strong sheet	„	0 10
Thin	„	0 11
Copper nails	„	1 0
Copper wire	„	0 11

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	
29/-	45/-	76/-	153/-	246/-	510/-	per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	
41/6	62/-	92/-	174/-	300/-	588/-	per doz

RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.	
39/-	60/-	116/6	per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.	
7/6	10/-	14/-	23/-	30/-	42/-	per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	
7/6	11/-	17/-	29/-	36/-	63/-	per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.	
10/-	12/-	20/-	24/-	31/-	per doz.

NEW RIVER PATTERN CROYDON BALL VALVES S.F.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	
35/-	56/-	98/-	162/-	228/-	per doz.

DRAWN LEAD P. & S. TRAPS WITH GLASS CLEANING SCREW.

	1¼ in.	1½ in.	2 in.	3 in.	
8 lbs. P. traps ..	33/-	41/-	56/-	101/-	per doz.
8 lbs. S. traps ..	35/-	45/-	66/-	126/-	„

TIN.—English Ingots, 2/5 per lb. SOLDER.—Plumbers' 1/-, Tinmen's, 1/2, Blowpipe, 1/3 per lb.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet, English, 4 lb. and up	17 10 0
Pipe in coils	17 0 0
Soil pipe	24 15 0
Compo pipe	26 0 0

NOTE.—Country delivery, 20s. per ton extra; lots under 3 cwt. 4s. per cwt. extra, and over 3 cwt. and under 5 cwt., 2s. 6d. per cwt. extra. Cut to sizes 4s. cwt. extra.

Old lead, ex London area, at Mills.....per ton } £9 5 0

PAINTS, &c.

	£ s. d.
Raw Linseed Oil, in pipes .....per gallon	0 2 5
„ „ „ in barrels ..... „	0 2 7
„ „ „ in drums ..... „	0 2 9
Boiled „ „ in barrels ..... „	0 2 10
„ „ „ in drums ..... „	0 3 0
Turpentine, in barrels ..... „	0 4 5
„ in drums (10 galls.) „	0 4 7
Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks.)	43 0 5

Extra for 1-cwt. kegs over 5-cwt. casks is 5/9 cwt.

GENUINE WHITE LEAD PAINT.

	£ s. d.
"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots per ton delivered	61 0 0
Red Lead, Dry (packages extra) ..... per ton	31 0 0
Best Linseed Oil Putty .....per cwt.	0 13 6
Size. XD quality ..... fkn.	0 3 0

VARNISHES, &c.

		Per gallon
Oak Varnish .....Outside		0 14 0
Fine Do.	Do.	0 16 0
Fine Copal	Do.	0 18 0
Pale Copal	Do.	1 0 0
Pale Opal Carriage	Do.	1 4 0
Best Do.	Do.	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	Do.	0 18 0
Fine Copal Cabinet	Do.	1 2 0
Fine Copal Flatting	Do.	1 0 0
Hard Drying Oak	Do.	0 18 0
Fine Hard Drying Oak	Do.	0 19 6
Fine Copal Varnish	Do.	1 0 6
Pale Do.	Do.	1 12 0
Best Do.	Do.	1 2 6
Best Japan Gold Size		0 12 6
Best Black Japan		0 10 0
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 7 6
Berlin Black		0 14 0
Knotting (patent).....		0 15 0
French and Brush Polish		0 12 0
Liquid Dryers in Terebene		0 9 0
Cuirass Black Enamel		0 7 0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	per ft.		per ft.
15 oz. fourths ..	2⅜d.	32 oz. fourths	6½d.
15 „ thirds	2⅝d.	32 „ thirds	8½d.
21 „ fourths ..	3½d.	Obscured Sheet, 15 oz.	3d.
21 „ thirds	3⅞d.	„ „ 21 „	4⅛d.
26 „ fourths ..	4½d.	Fluted, 15 oz. 6½d., 21 oz.	9d.
26 „ thirds	5⅜d.	Em'lld, 15 oz. 4½d., 21 oz.	5½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES.

	Per ft.
Rolled plate ⅛ in.	4⅜d.
Rough rolled $\frac{3}{16}$ in.	5⅜d.
Rough rolled ¼ in.	5⅜d.
Figured, Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White	5½d.
Do. tinted	8d.
Rolled Sheet	5d.
White Rolled Cathedral	5d.
Tinted Do.	7½d.

Cast plate is same price as rough rolled.

"VITA" GLASS.	Per ft. s. d.
Clearsheet—not exceeding 1 foot	1 0
Do. do 2 feet	1 3
Do. over 2 feet	1 9
Polished plate—not exceeding 1 foot	1 6
Do. do. 2 feet	3 0
Cathedral—not exceeding 1 foot	1 0
Do. larger sizes.....	1 6
Horticultural Sheet and Cathedral "Vita" Glass. Sizes up to 24 inches by 18 inches or not exceeding 3 feet	1 0
3/16 in. Wired Georgian Design. Sizes up to 96 inches log by up to 24 incheswide	2 9

BUILDING TRADE WAGES IN SCOTLAND*

Following are grade rates authorised by the Scottish N.J.C. for Building Industry. Painters by ruling of the Scottish National Painters' and Decorators' Joint Council, have from January 1 new rates. Grade A towns, 1/6 per hour; Grade B, 1/4; Aberdeen has a special rate of 1/5½. The new rate for Plasterers has been fixed at 1s. 6½d. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A¹	A²	A³	B	B¹	B²	B³
Craftsmen	1/6	1/5½	1/5	1/4½	1/4	1/3½	1/3	1/2½
Labourers	1/1½	1/1¼	1/0¾	1/0½	1/0	/11⅝	/11¼	11

Aberdeen.....A
Airdrie.....A
Alexandria ....A
Arbroath .....A
Ayrshire .....A
Bathgate .....A
Bo'ness .....A
Broughty Ferry A
Clackmannanshire A
Coatbridge ....A
Dumbartonshire A
Dumfries .....A²
Dumfriesshire ..A²

Dundee .....A
Dunfermline ....A
Dunoon .....A
East Lothian ....A
Edinburgh .....A
Falkirk .....A
Forfarshire ....A²
Fort William ..B
Galashiels .....A²
Glasgow .....A
Greenock .....A
Hamilton .....A

Hawick .....A²
Helensburgh ....A
Inverness .....B
Kilmarnock ....A
Kincardineshire A²
Kinross-shire ....A
Kirkcaldy .....A
Lanarkshire ....A
Leith .....A
Midlothian ....A
Motherwell .....A
Peeblesshire ....A²

Perth .....A
Perthshire .....A²
Peterhead .....A²
Renfrewshire ....A
Rothesay .....A
Roxburghshire ..A²
St. Andrews ....A
Selkirkshire ....A
Stirling .....A
Stirlingshire, West A
West Lothian ..A
Wishaw .....A

*The information given in this table is copyright. The rates of wages in various towns in England and Wales are given on page 246.

THE SCOTTISH BUILDER

HOUSING PROGRESS

The Department of Health for Scotland annnounce an increase in the number of State-assisted houses under construction in Scotland at the end of December as compared with the number under construction at the end of November. This is the fifth month in succession that an increase in the number of houses in course of erection has been announced. The December figure was 16,658, as compared with 14,042 at the end of July, an increase of 2,616 in that period. At the end of December there had been approved for erection under all State-assisted schemes 206,846 houses, of which at that date 183,130 had been completed. The total number of State-assisted houses completed by local authorities in Scotland in the year to December 31, 1934, together with the number of houses under construction and the number of houses which had been tendered for, but the construction of which had not begun at December 31, 1934, was 38,435. The corresponding number at December 31, 1933, was 33,702. In addition to the 183,130 houses reported above as having been completed up to the end of December, it should be noted that, for the purpose of improving the housing conditions of agricultural workers or of persons whose economic condition is substantially the same as that of such workers, no fewer than 17,101 houses had been reconstructed or improved with State assistance under the Housing (Rural Workers) Acts, 1926 and 1931, up to December 31, 1934, while at that date work was in progress on a further 2,861.

Slum Clearance.

Of the total of 16,658 houses under construction at the end of December, 13,626 were specifically for the rehousing of persons to be displaced from condemned houses. The corresponding figure at the end of the previous month was 13,022, and at the end of December, 1933, it was 8,771.

In addition to the 13,626 houses under construction, there were also 6,418 for which tenders had been approved, but the construction of which had not been begun at the end of the month. Many of these should now be under construction.

In the year 1934 tenders were approved for the erection of 17,449 houses specifically to replace unfit houses. This is easily a record, and is more than double the 1933 figure (8,171).

NEW BUILDINGS

ABERDEEN.—OFFICES.—The T.C. Electricity Committee have agreed to recommend that the test-room and offices at Ferryhill be extended, at £3,619.

ABERDEEN.—HOUSES. — The Plans and Town Planning Committee of the T.C. gave approval to plans for 354 houses at £150,500.

ARDROSSAN.—BAKERY. — The Ardrossan Co-operative Society Ltd., are to erect a bakery at a cost of £14,000.

AYR.—ALTERATIONS.—The Dean of Guild Court has passed plans for alterations at Messrs. Woolworth's Stores, 14-16, High-street. The estimated cost is £1,108.

BANCHORY.—ADDITIONS.—The Kincardineshire C.C. E.C. have decided to recommend to the Council approval of plans for additions to Banchory school. The estimated cost is £4,500.

BANNOCKBURN.—SCHOOL.—The Stirlingshire C.C. have agreed to erect a new school on a site to the west of the housing scheme at Murrayfield.

BARRHEAD.—HOUSES.—The T.C. has decided to proceed with 200 houses.

DINGWALL.—HOUSING.—The T.C. decided to build 20 new houses under the slum clearance scheme—16 of three rooms and four of four rooms.

(*Continued on page* 253.)

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	8	0
Add if in clay	,, ,,	1	0
Add for every additional depth of 6 ft.	,, ,,	0	6
Planking and strutting to trenches	per foot super	0	3
Do. to sides of excavation, including shoring	,, ,,	1	0

CONCRETOR.

Portland cement concrete in foundations 1 to 6	per yard cube	24	0
Add if in underpinning in short lengths	,, ,,	5	0
Add if in floors 6 in. thick	,, ,,	2	0
Add if in beams	,, ,,	2	6
Add if aggregate 1 : 2 : 4	,, ,,	8	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	,, ,,	1	6

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	26	0	0
Add if in stocks	,,	6	0	0
Add if in Staffordshire blues	,,	22	0	0
Add if in Portland cement and sand	,,	1	5	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

Neat flat struck or weathered joint	,, ,,	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork :—				
Fair external in half brick rings	,, ,,	0	0	10
Axed in stocks	,, ,,	0	0	9
Rubbed and gauged jointed in putty camber or segmental	,, ,,	0	5	9

SUNDRIES.

Damp course in double course of slates breaking joint and bedded in Portland cement	,, ,,	0	0	11
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	,,	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	,, ,,	9	6
Three-quarter-inch on flats in two thicknesses	,, ,,	6	0
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	,, ,,	1	0

MASON.

York stone templates fixed	per foot cube	12	9
York stone sills fixed	,, ,,	22	0
Bath stone and all labour fixed	,, ,,	10	6
Beer stone and all labour fixed	,, ,,	15	0
Portland stone fixed	,, ,,	15	6
Chilmark stone fixed complete	,, ,,	16	6

SLATER.

Welsh 16 in. × 8 in. 3 in. lap. including nails	per square	70	0
Do. 20 in. × 10 in. Do. Do.	,,	71	6
Do. 24 in. × 12 in. Do. Do.	,,	73	6

CARPENTER AND JOINER.

Fir framed in plates	per foot cube	3	6	
Do. joists	,, ,,	4	0	
Do. roofs, floors and partitions	,, ,,	4	6	
Do. trusses	,, ,,	6	9	
Deal rough close boarding per sq.	¾″ 30/-	1″ 35/-	1¼″ 43/-	2″ 70/-
Flat centering for concrete floor, including struts or hangers	,,	50	0	
Do. to beams	per ft. sup.	0	8	
Centre for arches	,,	1	6	
Gutter boards and bearers	,,	1	0	

FLOORING.

	¾″	1″	1¼″	1½″
Deal-edges shot per sq.	—	38/-	45/-	52/-
Do. tongued and grooved ,,	—	43/-	50/-	58/-
Do. matchings ,,	40/-	45/-	—	—
Moulded skirtings, including backings and grounds per ft. sup.	1/4	1/7	1/9	2/3

SASHES AND FRAMES.

One-and-a-half moulded sashes or casements	per foot super	1	9	
Two Do. Do. Do.	,, ,,	2	0	
Add for fitting and fixing	,, ,,	0	2	
Deal cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights, average size		3	3	

DOORS.

	1½″	1¾″	2″
Two-panel square framed per ft. sup.	2/1	2/3	2/5
Four-panel Do. ,,	2/4	2/6	2/9
Two-panel moulded both sides ,,	2/6	2/9	2/11
Four-panel Do. Do. ,,	2/9	2/11	3/2

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	12	0

	1″	1¼″	1½″
Plain deal jamb linings framed per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers ,,	1/2	1/4	1/7
Add if cross-tongued ,,	2d.	2d.	2d.

STAIRCASES.

	1″	1¼″	1½″	2″	2½″
Deal treads and risers in and including rough brackets	2/0	2/3	2/8	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. x 1½ in.	per ft. run	0	9
Mahogany handrail, average 3 in. x 3 in.	,, ,,	5	6
Add if ramped	,, ,,	11	0
Add if wreathed	,, ,,	22	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	15	0
Plain compound girders	,,	18	0
Do. stanchions	,,	20	9
In roofwork	,,	26	6

RAIN-WATER GOODS.

	3″	4″	5″	6″
Half-round plain rebated joints ft. run	1/-	1/1	1/3	1/6
Ogee Do. Do. ,,	1/2	1/3	1/9	2/3
Rain-water pipes with ears ,,	1/3	1/10	—	—
Extra for shoes and bends each	2/9	3/11	—	—
Do. stopped ends ,,	1/1	1/4	1/9	2/6
Do. nozzles for inlets ,,	2/2	2/7	3/7	4/-

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	32	0
Do. do. flats	,,	31	0
Extra labour and solder in coated cesspools	each	6	0
Welt joint	per ft. run	0	4
Soldered seam	,, ,,	1	2
Copper nailing	,, ,,	0	3

	½″	¾″	1″	1½″	2″	4″
Drawn lead waste per ft. run	10½	1/2	1/5	2/1	2/5	—
Do. service... ,,	1/1	1/6	1/9	2/8	—	—
Do. soil ..... ,,	—	—	—	—	—	5/-
Bends in lead pipe each	—	—	—	—	2/-	5/6
Soldered stop ends ,,	0/7	0/11	1/3	2/-	2/6	—
Red lead joints ,,	0/9	0/10	1/1	1/7	1/10	3/6
Wiped soldered joints ,,	2/-	2/6	2/9	3/5	4/3	6/-
Lead traps and cleaning screws ,,	—	—	—	10/-	13/-	—
Bib cocks and joints ,,	6/-	9/-	13/-	—	—	—
Stop cocks and joints ,,	10/6	12/6	17/6	50/-	—	—

PLASTERER.

Render, float and set in lime and hair	per yard sup.	2	0	
Do. Do. Sirapite	,, ,,	2	3	
Do. Do. Keen's	,, ,,	3	0	
Add saw lathing	,, ,,	1	4	
Add metal lathing	,, ,,	2	4	
(Not including hangers or runners, etc., for suspended ceilings.)				
Portland cement screed	,, ,,	1	7	
Do. plain face	,, ,,	3	3	
Mouldings in plaster	per 1 girth	0	1½	
One-and-a-half granolithic pavings	per yard sup.	4	6	

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	6½
26-oz. Do.	,, ,,	0	7½
Obscured sheet	,, ,,	0	8
⅛-in. rolled plate	,, ,,	0	9
¼-in. rough rolled or cast plate	,, ,,	0	10
¼-in. wired cast plate	,, ,,	1	1

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	7½
Knotting and priming	,, ,,	0	7
Plain painting, 1 coat	,, ,,	0	9
Do. 2 coats	,, ,,	1	2
Do. 3 coats	,, ,,	1	9
Do. 4 coats	,, ,,	2	4
Graining	,, ,,	2	3
Varnishing twice	,, ,,	1	9
Sizing	,, ,,	0	3
Flatting	,, ,,	0	7
Enamel	,, ,,	1	1
Wax polishing	per foot sup.	0	6
French polishing	,, ,,	1	3
Preparing for and hanging paper	per piece 2/- to	4/-	

* These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Act, and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

(*Continued from page* 251.)

EYEMOUTH.—EXTENSIONS.—The Berwickshire C.C. have approved of £7,000 for extensions to the High Public school.

GALSTON.—ADDITIONS. — Plans are in hand for a £7,500 scheme of reconstruction and additions to Glebe-street school. Mr. William Reid, architect, Wellington-square, Ayr.

GLASGOW.—HOUSES. — Permission was granted to the Corporation at the Dean of Guild Court to build close on 80 houses. Messrs. S. Gordon & Co., builders, Crow-road, were granted permission to build nineteen houses in Herris-road, Pollokshields. Other linings granted were: Messrs. Spillers, Ltd., to erect grain silo at Scotstoun Hill-road; Church of Scotland to erect a church, halls and offices at Broadholf-street and Crowhill-street; and Home Mission Committee to erect a church, halls, and offices at Croftpark-avenue at Crofthill-road; Royal Samaritan Hospital for Women, a paying patients' block at Copelaw-street; Messrs. William Beattie, Ltd., bakers, new offices and canteen at Paton-street; George Investment Trust, Ltd., shops, etc., 111, Union-street.

GLASGOW.—BUILDING.—Plans for two new buildings at a cost of £10,000 each, to serve as junior instruction centres, were approved at a meeting of the Property Sub-Committee of the E.C. of the Corporation. The Sub-Committee also approved of plans for the adaptation of three other buildings for the same purpose. The two new centres are to be provided at Hillfoot (for girls) and at Renwick-street, Kinning Park (for boys). The adaptation of existing premises is estimated to cost, in each case, about £1,000.

GLASGOW.—HOUSES. — The Corporation has approved of the scheme to build 350 houses by direct labour on a site at Bellahouston. The scheme is estimated to cost £119,031.

GLASGOW.—BUILDING.—The Corporation have approved of the erection of a new electricity sub-station at £3,000. Mr. Herbert Bell, engineer, Electricity Offices.

GREENOCK. — ADDITIONS. — Plans have been passed by the Dean of Guild Court for reconstruction and additions costing £7,500 to Greenock Golf Course. Mr. Will J. B. Wright, architect, 1, Blytheswood-square, Glasgow.

IRVINE.—HOUSES.—The lay-out plan for the additional 100 houses to be erected by the T.C. has been approved by the Department of Health for Scotland.

KILBIRNIE.—EXTENSION.—The Ayr C.C. E.C. have agreed to approve of plans for extensions at St. Bridget's R.C. school, at £3,738.

LANARKSHIRE. — BUILDING. — The C.C. have plans in hand for reconstruction, alterations, etc., to the following schools: Coatbridge Secondary school, Uddington Grammar school, Shawsburn Primary school, Glengowan Primary school, Larkhall; Hawksland Primary school, Wishaw Central school, St. Augustine R.C. school, Coatbridge; St. Patrick's R.C. school, Coatbridge; Gartsburn Academy Primary school, Greenhill Primary school, Coatbridge. Mr. John Stewart, architect, Albert-street, Motherwell.

MOTHERWELL.—CENTRE.—Plans are in hand for the erection for the town and district of a new junior instruction centre. Mr. John Stewart, architect, Albert-street, Motherwell.

NEWTON MEARNS.—HOUSES. — Messrs. David Paul, builders, 12, Wedderlea-drive, Cardonald, Glasgow, have received the permission of the Renfrewshire C.C. to erect 51 houses at Hazelwood-avenue, Firwood-road, and New-road.

RENFREW.—HOUSES.—The Housing Committee of the T.C. have recommended that they proceed with the building of 184 new houses in the Moorpark district.

STIRLING.—HOUSING. — Ground at the Raploch has been feued by public roup by the patrons of Cowane's Hospital to the T.C. for the erection of an additional 112 houses under the 1930 Housing Act.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* **Denotes** *accepted.*
† **Denotes** *provisionally accepted.*
‡ **Denotes** *recommended for acceptance.*
§ **Denotes** *accepted subject to modifications.*
¶ **Denotes** *accepted by H.M. Government Departments.*

Acton.—Sports pavilion on the Heathfield Lodge site, Acton, for the Middlesex C.C.:—

E. Plaistowe & Sons, Ltd., Southall	£1,450 0 0
J. A. Perriss, Acton	1,402 18 7
Wm. Harbrow, Ltd., Bermondsey	1,319 0 0
W. S. Try, Uxbridge	1,193 0 0
*Thomas Bros., Wembley	1,047 17 0

Alperton.—New Council School in Vincent-road, for the Middlesex C.C.:—

W. M. Brand	£31,772 0 0
W. J. Cearns, Ltd.	27,920 0 0
Newby Bros., Ltd.	27,617 0 0
Kirk & Kirk, Ltd.	26,990 0 0
W. J. Dickens	26,949 0 0
Building & Public Works Construction Co., Ltd., Swindon	26,678 0 0
J. Stewart & Sons, Ltd.	26,555 0 0
Thomas Evan & Sons	26,497 18 6
G. H. Dibblin, Ltd.	26,380 0 0
‡W. Lay & Son, Ltd., Ashmore-road, W.9	25,935 0 0

(Remainder of London.)

Ashford.—Various works at the small holdings, for the Middlesex C.C.:—

	12 cottages and outbuildings.	Water supply.
Janes (Builders), Ltd., Slough	£6,108 0 0	£110 0 0
N. Swindells, Ashford	6,059 8 0	150 0 0
A. E. A. Prowting, Ltd. Ruislip	5,846 0 0	192 0 0
Fassnidge, Son & Norris, Uxbridge	5,746 0 0	190 0 0
Sloggetts, Ltd., Hampton Hill	5,611 0 0	102 0 0
M. C. Seth, Ickenham	5,577 10 6	135 11 11
W. S. Try, Cowley, Uxbridge	5,538 0 0	173 0 0
W. J. Drinkwater & Sons, Feltham	5,400 0 0	80 0 0
H. Street & Co., Slough	5,280 0 0	139 0 0
T. Morrow, Ruislip	5,232 0 0	110 0 0
E. J. G. Morgan, Uxbridge	5,040 0 0	25 10 0
*The Building and Public Works Construction Co., Ltd., County Works, Swindon	4,949 0 0	114 0 0
Thomas Bros., Wembley	4,725 0 0	189 17 6
C. F. Palmer & Co., Ltd., London	4,310 0 0	9 10 0

	Fencing.	Field gates. Each.
T. W. Palmer & Co., London	£433 2 6	£3 12 6
Croggon & Co., Ltd., London	385 0 0	2 17 6
W. S. Try, Cowley, Uxbridge	367 10 0	—
Fassnidge, Son & Norris, Ltd., Uxbridge	367 10 0	—
A. E. A. Prowting, Ltd., Ruislip	360 0 0	—
*Peerless Wire Fencing Co., Greenford	344 17 11	3 15 0

Blackhill.—Engineering constructional centres, for International Nut and Bolt Co., and Ford Motor Co.:—

*A. D. Downey & Co., Norwich.

Bolton.—174 houses on the Entwistle-street estate, Tonge Moor, for the T.C.:—

*Direct Labour £50,400

Bradford.—138 houses on Cross-lane, Tong, Cross-lane and Hobson's-lane:—

*H. Emmott, Ltd.

Brentford and Chiswick.—Reconstruction of wharf and wharf wall at Town Meadow depot, Brentford, for the T.C. Mr. L. A. Cooper, Borough Engineer and Surveyor:—

*Cleveland Bridge & Engineering Co., Ltd., Darlington £3,000

Brighton.—Excavation and clearance of the site and erection of the retaining walls in connection with the proposed fruit and vegetable market on Carlton-hill, for the T.C.:—

‡H. Pannett, Ltd. £8,743

Brighton.—Eight shops in blocks of six and two at Rottingdean, for the T.C.:—

*Building and Public Works Construction Co., Ltd. £12,396 0 0

Brighton.—68 small homes on the Manor Farm estate, for the T.C.:—

O. T. Hedges, Ltd., Rickmansworth, Herts	£22,308
Geo. Ferguson & Son, Patcham	21,760
Eldon Fox, Ltd., West Croydon	19,884
Unit Construction Co., Ltd., London	19,244
Building and Public Works Construction Co., Ltd., Swindon	18,498
Wilson Lovatt & Sons, Ltd., Wolverhampton	16,946
*E. S. Moss, Ltd., Cricklewood, London	15,300

Brighton.—364 non-parlour type houses on the Manor Farm estate, for the T.C.:—

Morrell (Builders), Ltd., Bromley	£192,671 0 0
Geo. Ferguson & Son, Patcham	135,420 0 0
Unit Construction Co., Ltd., London	132,750 0 0
Building and Public Works Construction Co., Ltd., Swindon	128,935 0 0
E. S. Moss, Ltd., Cricklewood, London	127,498 0 0
Wilson Lovatt & Sons, Ltd., Wolverhampton	126,648 0 0
Butler Bros., Erdington, Birmingham	124,521 0 0
James Scott, Portslade	118,390 0 0
*Green & Sons, Portslade	103,151 1 3

Cardiff.—Houses, for the T.C.:—

	Per house
Lot 1 (Tweedsmuir and Kenyon-roads, Tremorfa), 10 type 36 houses (non-parlour, three bedrooms)—	
*E. Addicott & Son, Cardiff	£270 5 0
36 type 33 houses (non-parlour, two bedrooms)	247 11 0
Lot 2 (depot site, Tremorfa), 14 type 33 houses (non-parlour, two bedrooms)—	
*W. S. Eglen, Ltd., Cardiff	247 0 0
Lot 3 (Old Cattle Market site, Sloper-road), 12 type 36 houses (non-parlour, four bedrooms)—	
*C. Brown & Co., Cardiff	342 5 0
6 type 35 houses (non-parlour, three bedrooms)	271 0 0
22 type 33 houses (non-parlour, two bedrooms)	251 0 0

Chelmsford.—For erection of 19 cottages at Writtle, for R.D.C.:—

*K. W. K. Mitchell, Writtle £5,624

Croydon.—Sedimentation tank in connection with the Norbury works at Beddington Farm, for the C.B.:—

*Direct Labour.

Supply steel—
Indented Bar and Concrete Engineering Co., Ltd. £390

Dundee.—42 houses in Maitland-street, for the T.C.:—

Mason—
*D. K. Symington, Dundee £6,138
Joiner work—
*D. Graham, Dundee 2,457
Lath—
*Slimman & Robertson, Dundee 343
Glazier—
*W. Cameron & Son, Dundee 67
Slater and roughcast—
*Wm. Brand & Son, Dundee 530
Plumber—
*J. Robertson & Son, Dundee 1,123
Plasterer—
*D. & M. Hunt, Dundee 746
Electric light—
*Stenson & Co., Dundee 258
Grates—
*M. R. Ingram, Dundee 199

East Elloe.—48 houses at Holbeach, for the R.D.C.:—

*G. A. Campion, Peterborough £13,927

East Kesteven.—8 dwellings at Heckington, for the R.D.C. Mr. Edwin H. Sills, L.R.I.B.A., architect, Northgate, Sleaford. Quantities by the architect:—

*J. Colam, 10, Horncastle-road, Boston £2,280

Edgware.—Improvement of High-street, Edgware, providing for the construction of two 27-ft. carriageways with a 14-ft. centre space and two 16-ft. footpaths, for the Middlesex C.C.:—

Hadsphaltic Roads, Ltd.	£7,966 8 6
G. P. Trentham & Co., Ltd.	7,780 17 11
E. Knifton, Ltd.	7,368 9 10
W. & C. French & Co., Ltd.	7,164 6 5
Constable, Hart & Co., Ltd.	7,106 3 7
G. J. Anderson	7,084 19 7
Ruddock & Meighan	7,034 0 1
G. Wimpey & Co., Ltd.	7,017 4 0
Mears Brothers	6,893 11 8
Fitzpatrick & Co., Ltd.	6,829 15 4
W. Griffiths & Co., Ltd.	6,765 17 10
John Mowlem & Co., Ltd.	6,680 9 3
Howard Farrow, Ltd.	6,582 16 0
*Roads & Public Works, Ltd.	6,328 3 9

Edinburgh.—Reconstruction and extensions at York-place, for the Pharmaceutical Society of Great Britain, London. Messrs. Leadbeater, Fairley & Reid, architects, 17, Young-street:—

Excavation, brick and mason—*Colin MacAndrew & Partners, Ltd., London.
Plumber work and sanitary fittings, etc.—*J. Paterson.
Heating engineering and installation—*Mackenzie & Moncar.
works—*MacAndrew & Partners, Ltd.
Joinery, carpentry, ironmongery and glazing.
Painter work and decoration—*W. Forsyth & Son.
Electrical installation, fittings—*W. Douglas, Ltd.
Asphalting, cement and plaster—*Colin MacAndrew & Partners, Ltd.

(Remainder of Edinburgh.)

Edmonton.—Heating of infirm wards at Edmonton House, N.18, for the Middlesex C.C. :—

Cannon & Hefford, Ltd.	£300 0 0
The Brightside Foundry and Engineering Co., Ltd.	279 0 0
The Fretwell Heating Co., Ltd.	238 0 0
Heath & Co.	198 0 0
Deane & Beal, Ltd.	176 10 0
*Comyn Ching & Co., Ltd.	174 0 0

Exhill.—Junior school at Wheelwright's lane, for the Warwickshire E.C. :—

Foundations and reinforced structural work—
*J. H. Cooper, Coventry £5,182
Building work—
*J. H. Cooper, Coventry 9,114
Heating—
*Ashwell & Nesbit, Ltd., Birmingham ... 1,056

Faversham.—For erection of 24 houses, for the T.C. :—

*Bush Building Co., Ramsgate £7,512

Feltham.—Additional accommodation at the Feltham Hill Council School, Ashford-road, for the Middlesex C.C. :—

W. J. Drinkwater & Co., Ltd., Feltham	£585 0 0
Vivians (Hounslow), Ltd., Hounslow	566 0 0
Thompson Bayliss & Co., Ltd., Rainham	497 8 3
Wm. Harbrow, Ltd., Bermondsey	477 0 0
W. S. Try, Uxbridge	434 16 0
*J. Harrison & Co., Camberwell...	418 0 0

Glasgow.—3 double and 6 single shops at Carntyre South. Mr. William McNab, architect, Housing Director's Office, Trongate :—

Excavation, brick and mason—
*Wilson Brothers, Glasgow £1,392
Joinery, carpentry and ironmongery—
*A. McMillan, Glasgow 2,110
Plumber work and sanitary fittings—
*H. Twaddle & Son, Ltd., Glasgow 173
Glazier—
*W. Purdon & Son, Glasgow 260

Goole.—Erection of new senior school and caretaker's house, for West Riding C.C. Mr. H. Wormald, A.R.I.B.A., architect, County Hall, Wakefield :—

Builders—*J. Richardson, Barnsley.
Joiners—*J. T. Jenkinson, Ltd., Leeds.
Slaters—*H. & W. Parker, Hunslet.
Plumber—*A. Plant, Sheffield.
Plasterers—*A. Ullathorne & Sons, Doncaster.
Asphalting—*J. Hadfield & Sons, Sheffield.

Goole Pilate.—6 houses, also 7 sets of farm buildings on Old Hall and Brine Pits Farms, for the Cheshire C.C. Mr. M. T. Hedley, F.S.I., County Land Agent, 16, Nicholas-street, Chester :—

*T. L. Kendall & Son, Audlem.

Gourock.—58 houses and other works at the Copper Dam site, for the Corporation. Messrs. Berton, Menzies & Martin, architects, 11, William-street. Mr. George Fisher, F.F.A.S., surveyor, Moss-street, Paisley :—

Excavation, brick and mason—*Miller & Renwick, Bothwell.
Joinery, carpentry and ironmongery—*J. Preston & Son, Greenock.
Slater and roughcasting—*J. Holmes & Sons, Greenock.
Plumber work and sanitary engineering—*J. Smith, Paisley.
Plaster—*S. Holmes, Rutherglen.
Painter—*T. Hastie & Son, Glasgow.
Fencing and gates—*Ramage & Whitehead, Glasgow.

Grimsby.—Erection of new senior school at Immingham, for Lindsey E.C. Mr. P. W. Birkett, A.R.I.B.A., County Architect, County Offices, Lincoln :—

Markwell, Holmes & Hayter, Ltd., Hull	£25,125
Stamp & Son, Barton-on-Humber	24,050
J. Tuxworth & Sons, Louth	21,400
T. Jenkinson & Sons (Doncaster), Ltd.	19,981
A. Richmond & Sons, Retford	19,980
Wilkinson & Houghton, Ltd., Cleethorpes	19,884
R. Moore & Son, Mansfield	19,687
B. Pumfrey, Ltd., Gainsborough	19,334
H. Ashton, Barton-on-Humber	19,280
R. G. Tarran, Ltd., Hull	18,609
T. Roper & Sons, Ltd., Sheffield	18,249
†R. M. Phillips & Son, Ltd., Brigg	17,495

Herts.—Construction of the portion of the North Orbital-road from the Herts-Bucks county boundary, Shire-lane, to the junction of the Ricksmanworth-Uxbridge-road, Long-lane :—

*George Wimpsey & Co., Ltd., Hammersmith .....approx. £50,000

Hillingdon.—Changing rooms and shower baths, at Bishopshalt school, for the Middlesex C.C. :—

Bell Decorations and Structures, Aldwych, W.C.2	2,284 13 6
W. J. Dickens, Ealing	2,220 0 0
A. & B. Hanson, Ltd., Southall	2,115 0 0
F. D. Hidden & Co., Ltd., Brentford	2,088 0 0
Fassnidge, Son & Norris, Ltd., Uxbridge	2,047 0 0
W. S. Try, Uxbridge	2,028 0 0
*E. Plaistowe & Sons, Ltd., Southall	1,979 0 0

Hornsey.—Woodkeepers' lodge at Coldfall Wood, Creighton-avenue, N.10, for the B.C. Mr. W. H. Adams, Borough Engineer and Surveyor :—

*Burgess & Read, Watford £1,390

Hornsey.—Sports Pavilion with classrooms on the playing fields of the County School, for the Middlesex C.C. :—

J. E. McCormick, Finchley	£3,232
Leeds of Enfield, Ltd., Enfield	3,065
Boulton & Paul, Ltd., E.C.1	2,650
J. Stewart & Sons, Ltd., Tottenham	2,568
W. J. Cearns, Ltd., Stratford	2,496
Wm. Harbrow, Ltd., Bermondsey	2,459
Norman, Wright (Builders), Ltd., South Norwood	2,433
*Newby Bros., Ltd., Southgate	2,380

Hove.—Five-story block of modern residential flats :—

*Harland & Parker, Ltd., West Harlepool £25,000

Hull.—Erection of steel framed factory, for the British Cod Liver Oil Producers, Ltd. Messrs. J. Watson & Carter, architects, Cogan-chambers, Bowlalley-lane :—

*R. G. Tarran, Hull £32,830

Isleworth.—Repairs to the gutters, roofs and roof lights at Warkworth House, for the Middlesex C.C. :—

F. D. Hidden & Co., Ltd., Brentford	£940 0
Wm. Lacey, Hounslow	662 0
W. S. Try, Uxbridge	629 0
J. C. Fenson, W.7	596 5
*E. Plaistowe & Sons, Ltd., Southall	539 5

Kenilworth.—Erection of 30 three-bedroom type houses and apartment works, including the construction of road on Watling Housing site, for U.D.C. Mr. E. Shaw, Surveyor, Council House :—

Houses—
*J. H. Lawrence £2,700
*F. Aitken 5,640
Roads—
*Powell & Simpson 635
(All of Kenilworth.)

Kingsclere and Whitechurch.—Eight houses at St. Mary Bourne, for the R.D.C. :—

*L. G. Durnford, Newbury £2,260

Leeds.—Synagogue in Spencer-place, Roundhay-road. Messrs. Kirk & Tomlinson, architects :—

*J. Tomlinson & Sons.

Lincoln.—Alterations and additions to school buildings at Sincil Bank, for E.C. Messrs. Watkins & Coombes, F. & A.R.I.B.A., architects, St. Edmund's-chambers, Silver-street :—

F. Hossack & Son, Ruskington	£14,988
R. Moore & Son, Mansfield	13,991
Thornhill Bros., Lincoln	12.852
*W. Wright & Son, Ltd., Lincoln	12,839

Liverpool.—Erection of hotel off Moorfields, Eberle-street and Dale-street, for Sir J. S. Allen and others. Mr. A. Ernest Shennan, F.R.I.B.A., architect. North House, 7, North John-street, Liverpool, 2 :—

*W. Downs, Ltd., London, S.E.17.
(Estimated cost: £350,000.)

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London.—For contract B in connection with the installation of additional purification plant at Northern outfall works, for the L.C.C. :—

Hayes & Greatree, Ltd., Romford	£121,639 4 9
Kinnear, Moodie & Co.	114,338 17 7
Contracting Corporation, Ltd.	108,540 1 4
A. Jackaman & Son, Ltd.	92,928 11 4
Peter Lind & Co., Ltd.	86,794 13 5
Metropolitan Construction Co., Ltd.	86,460 6 7
A. Waddington & Son	83,047 19 7
L. J. Speight & Partners, Ltd.	80,044 15 10
Edmund Nuttall, Sons & Co., and John Mowlem & Co. (Joint), Ltd.	79,465 19 6
Howard Farrow, Ltd.	79,000 10 0
Sir Lindsay Parkinson & Co., Ltd.	78,961 16 6
John Shelbourne & Co., Ltd.	76,821 2 0
W. & C. French, Ltd., Buckhurst-hill	76,643 8 10
Melville Dundas & Whitson, Ltd.	75,135 14 4
Concrete Piling, Ltd.	74,830 15 0
M. A. Boswell, Wolverhampton	74,545 4 3
Holloway Bros. (London), Ltd.	73,255 17 7
Shanks & McEwan, Ltd., Glasgow	72,796 9 4
J. L. Rodger & Sons, Ltd., Castleford	72,603 3 8
J. L. Eve Construction Co., Ltd.	71,081 19 1
The Demolition & Construction Co., Ltd.	69,990 5 6
Sir William Prescott & Sons, Ltd.	58,111 1 7
Crowley Russell & Co., Ltd., Glasgow	58,902 10 0
*Richard Costain, Ltd., 7 and 8, Norfolk-street, Strand, W.C.2	55,341 19 7

(Chief Engineer's estimate: £85,818 6s. 9d.)
(Remainder of London.)

London.—59 dwellings on the Dinmont estate, Bethnal Green, for the L.C.C. :—

		Empire materials.
Mullen & Lumsden, Ltd.	£25,381	£25,381
Walter Lawrence & Son, Ltd.	24,111	24,184
C. P. Roberts & Co., Ltd.	22,997	22,997
E. A. Russell, Ltd.	22,800	22,800
Harry Neal, Ltd.	22,734	22,734
C. Miskin & Sons, Ltd., St. Albans	22,666	22,666
Thomas Bates & Son, Ltd., Coventry	22,654	22,700
Commercial Structures, Ltd.	22,586	22,586
H. C. Horswill, Ltd.	22,465	22,465
Charles S. Foster & Sons, Loughton	22,443	22,443
William Moss & Sons, Ltd.	22,372	22,372
Leslie & Co., Ltd.	22,245	22,245
A. T. Rowley (London), Ltd.	22,182	22,182
Unit Construction Co., Ltd.	21,898	21,898
R. J. Rowley, Ltd.	21,386	21,386
Rowley Bros., Ltd.	21,348	21,348
W. H. Gaze & Sons, Ltd., Kingston-on-Thames	21,143	21,143
Wilson Lovatt & Sons, Ltd., Clarence-street, Wolverhampton	20,832	*20,832

(Architect's estimate on Empire materials: £21,112.)
(Remainder of London.)

London.—Erection of blocks Nos. 8 and 14 and road finishings on the Vassall-road site, Brixton, for the L.C.C. :—

		Empire materials.
Walter Lawrence & Son Ltd.	£28,961	£29,051
Holliday & Greenwood, Ltd.	28,802	28,802
Rice & Son, Ltd.	27,885	27,885
Sir Lindsay Parkinson & Co., Ltd.	27,685	27,685
Henry Boot & Sons, Ltd.	27,608	27,608
G. E. Wallis & Sons, Ltd.	27,349	27,349
Albert Monk	27,235	27,235
Humphreys, Ltd.	26,986	26,986
Anglo-Scottish Construction Co., Ltd.	26,954	26,954
A. T. Rowley (London), Ltd.	26,847	26,847
Gee, Walker & Slater, Ltd.	26,793	26,793
Thomas Rowbotham, Birmingham	26,501	26,601
C. Miskin & Sons, Ltd., St. Albans	26,231	26,231
Rowley Bros., Ltd.	26,200	26,200
W. H. Gaze & Sons, Ltd., Kingston-on-Thames	25,954	26,083
Wilson Lovatt & Sons, Ltd., Wolverhampton	25,784	25,784
Unit Construction Co., Ltd.	25,580	25,580
R. J. Rowley, Ltd., Belmont-avenue, Tottenham, N.17	25,382	*25,382

(Architect's estimate on Empire materials: £25,975.)
(Remainder of London.)

London.—Supply and fixing of patent fire and sound resisting floors for the first block of tenements in Stewarts-lane, for the Battersea B.C. :—

*Diespeker, Ltd., 57, Holborn Viaduct, E.C. £200 8 6

London.—New town hall upon the vacant site on the south side of Euston-road, bounded by Judd-street, Bidborough-street and Tonbridge-street, for the St. Pancras B.C. :—

*Dove Bros., Ltd. £263,750

(Accepted at £256,882 after heavy reductions: this is in lieu of the statement in our last issue.)

¶**London.**—The following works contracts have been placed by the War Office during the week ended January 24 :—

Aldershot—company offices, stores, etc.—Lee Bros. (Aldershot), Ltd., Aldershot; and artificers' work, J. Chuter, Farnham.
Woodwich—artificers' work—Fairweather & Ranger, London, W.C.

***London.**—Tenders accepted by H.M.O.W. for the week ended January 24 :—

Head Post Office, Birmingham—alterations to public office, etc.—J. E. Harper & Son, Ltd., 72-82, Lombard-street, Birmingham.

Flower Walk, Kensington Gardens—construction of new lavatory—Rice & Sons, Ltd., 15, Stockwell-road, S.W.9.

Unemployment Assistance Board—supply and delivery of committee tables—F. Troy & Co., Ltd., 194 Finchley-road N.W.3.

Woolwich County Court—erection—The Commercial Structures, Ltd., 38-44, Canal-road, Kingsland, N.1.

Queen Alexandra Hospital, Cosham, Hants—heating and hot water services—Cannon & Hefford, Stanbury-road, Peckham, S.E.15.

Chichester Post Office and Telephone Exchange—foundation contract—F. J. Privett, Ltd., Cottage Grove, Southsea.

Morpeth postal and engineering garage—alterations—R. Carse & Son, Ltd., Amble.

Southampton Employment Exchange—supply and delivery of steel casements—F. Braby & Co., Ltd., Petershill-road, Glasgow.

Coalville Employment Exchange—erection—Orton & Co., London-road, Coalville.

London.—Alterations to the Hyde Park-corner women's convenience, for the Westminster City Council :—

Walter Lilly & Co.	2,325
F. Cope & Co., Ltd.	2,233
Demolition & Construction Co., Ltd.	2,193
Griggs & Son, Ltd.	2,149
John Garlick (1910), Ltd.	2,126
B. Finch & Co., Ltd.	2,020
*Sims & Russell	1,976

London.—For repairs and redecorations, etc., at (*a*) 64, Muswell-avenue, Muswell Hill, and (*b*) 112, Brownlow-road, Bowes Park, for the Middlesex C.C. :—

(*a*)—	
Newby Bros., Ltd.	£297 0 0
D. C. Martin & Sons, Ltd.	290 0 0
A. T. Rowley (London), Ltd.	271 0 0
Stevens & Sons	264 0 0
A. Harston & Co.	262 11 6
*G. Groves & Son	253 0 0
(*b*)—	
Stevens & Sons	284 0 0
D. C. Martin & Sons, Ltd.	252 0 0
A. T. Rowley (London), Ltd.	241 0 0
A. Harston & Co.	233 19 11
G. Groves & Son	226 0 0
*Newby Bros., Ltd.	213 0 0

London.—Demolition of "Medina," Lawrence-street, Mill Hill, for the Middlesex C.C. :—

	Contractor to pay County Council	County Council to pay Contractor
Geo. Reeves, Wembley	—	£10 0 0
T. Rainbow, Ltd., Southgate	No charge	
S. Godleman, Ltd., Kenton	£12 10 0	—
*H. Boyer, Wembley	20 0 0	—

London.—Tuberculosis dispensary in Devonport-street, for the Stepney B.C. :—

R. J. Rowley, Ltd.	£8,146 0 0
The Unit Construction Co., Ltd.	7,923 0 0
Lees of Enfield, Ltd.	6,954 6 0
Spiers, Ltd.	6,850 0 0
Watts & Co., Sutton	6,737 18 8
A. T. Rowley (London), Ltd.	6,429 0 0
H. C. Horswill, Ltd.	6,389 0 0
*Ashby & Horner, Ltd., 8, Aldgate, E.C.3	6,193 0 0
(Remainder of London.)	

London.—New river wall at Eagle Wharf, for the Stepney B.C. :—

D. T. Jackson, Ltd., Barking	£2,371 0 0
John Mowlem & Co., Ltd., and Edmund Nuttall & Sons, Ltd.	2,327 17 0
W. & C. French, Ltd., Buckhurst Hill	1,840 0 0
John Gill (Contractors), Ltd.	1,825 0 0
D. G. Somerville & Co.	1,775 0 0
J. Shelbourne & Co., Ltd.	1,739 0 0
*Christiani & Nielsen, Ltd., Romney House, Marsham-street, S.W.	1,670 0 0
Architect's estimate	1,500 0 0
(Remainder of London.)	

London.—Additional lavatory accommodation at the town hall extension, for the Lewisham B.C. :—

*G. E. Wallis & Sons, Ltd. £130

Lynn.—16 flats at Saddlebow-road, for the T.C. :—

*E. Knape & Son £3,252

Madeley.—Semi or mixed school for 400 scholars, for the Shropshire County E.C. Mr. A. G. Chant, A.R.I.B.A., County Architect, 5, Belmont, Shrewsbury :—

*E. Taylor & Co., Ltd., Littleborough £17,699

Maidstone.—Police court, for the T.C. :—

*Cox Bros. £12,839

Merthyr Tydfil.—Alterations and additions to the Quakers' Yard Mining Institute, for the E.C. :—

E. Turner, Cardiff	£3,494 0 0
R. W. Moon, Newport	3,436 0 0
J. E. Jones, Pontllanfraith	3,428 16 4
G. J. James, Pontypridd	3,318 0 0
T. R. Jones, Abertridwr	3,270 14 8
J. G. Thomas, Abergavenny	3,192 0 0
*Geo. Warlow, Merthyr	3,110 0 0
E. James, Ystrad Mynach	3,088 1 8
Geo. A. Brown, Ebbw Vale	3,074 14 7
E. Williams & Son, Dowlais	2,842 0 0

Stanwell.—Various works at Bedfort Court estate, for the Middlesex C.C. :—

	20 cottages and outbuildings.	Alternative roof to outbuildings per house.	Water supply.
Sloggetts, Ltd., Hampton Hill	£9,352 0 0	£4 10 0	£271 0 0
M. C. Seth, Ickenham	9,215 10 0	7 2 11	211 4 7
W. J. Drinkwater & Sons, Feltham	8,800 0 0	3 0 0	190 0 0
H. Street & Co., Slough	8,490 0 0	3 0 0	234 0 0
Janes (Builders), Ltd., Slough	8,360 0 0	4 18 0	265 0 0
E. J. Morgan, Uxbridge	8,350 0 0	86 0 0	39 7 4
Thomas Bros., Wembley	8,100 0 0	5 10 0	299 0 0
T. Morrow, Ruislip	8,120 0 0	2 0 0	180 0 0
Moysons, Ltd., Harmondsworth	7,940 0 0	4 10 0	200 0 0
*The Building and Public Works Construction Co., Ltd. County Works, Swindon	7,599 0 0	3 15 0	198 16 0
H. J. Breyley, Cobart, Torquay	6,505 0 0	5 15 0	175 14 2
	Fencing.	Field gates. Each.	Hand gates. Each.
Croggon & Co., Ltd., 230, Upper Thames-street	£595 16 8	£2 18 9	£1 18 9
T. W. Palmer & Co., Ltd., Merton, S.W.19	584 7 6	3 12 6	2 7 6
*Peerless Wire Fence Co., Greenford, Middlesex	492 14 2	3 5 0	2 0 0

Mexborough.—102 houses in Windmill and Cowper-road, for the U.D.C. Mr. G. F. Carter, surveyor :—

Thomson & Dixon, Doncaster	£33,620 0
W. Memmory & Sons, Sheffield	31,452 0
Bambridge, Ltd., Doncaster	30,495 0
C. W. Meanley & Sons, Ltd., Melton	29,956 0
B. Bailey, Mexboro'	29,472 15
*O. Weaver, Mexboro'	28,478 0

Middlesbrough.—Two-story scarlet fever block at the West-lane Hospital, for the T.C. Mr. S. E. Burgess, Borough Engineer :—

*H. Walker, 25, Windsor-road, Middlesbrough £15,624

Middlesbrough.—Accommodation—staff block and lecture theatre, at the mental hospital, for the T.C. :—

*Arthur McLeod, Ltd., Bridge-street, Thornaby-on-Tees £12,980 13 2
(In lieu of tender withdrawn.)

Middlesex.—Further 1,300 yards of chain and link fencing along land acquired by the County Council for the construction of Western-avenue, for the Middlesex C.C. :—

*Peerless Wire Fencing Co. £180

Middlesex.—Three cottages at the Mogden purification works, for the C.C. :—

A. L. Lewey, Hounslow	£2,640 0 0
A. Loughton & Farrow, Hounslow	2,302 15 6
Stewart & Co., Durlston, Whitton	2,239 10 0
Harris (Contractors), Ltd., Tudor-parade, Hounslow	2,210 0 0
*E. & J. Cotton, Ltd., Syon Hill Estate, Great West-road, Isleworth	1,994 3 6
Thomas Bros., Wembley	1,940 8 8½

Middlesex.—For contract S.28 for the sludge main and Perry Oaks branch sewer, for the C.C. :—

Thomas Bugbird & Son, Ltd., Leicester	£62,000 0 0
Howard Farrow, Ltd., London	58,411 15 3
C. V. Buchan & Co., Ltd., Brighton	54,196 13 11
Edmund Nuttall, Sons & Co., and John Mowlem & Co. (Joint), Ltd., London	54,055 5 6
Cleveland Bridge & Engineering Co., Ltd., Isleworth	53,380 11 3
*W. & C. French, Ltd., Buckhurst Hill	52,960 2 3

Middleton.—Erection of elementary school at Boarshaw, for the T.C. Messrs. Naylor, Sale & Widdows, F. & L.R.I.B.A., architects, St. Mary's-chambers, St. Mary's-gate, Derby :—

‡J. Hobson & Sons, Ltd., Nottingham.
(£9,500 recommended.)

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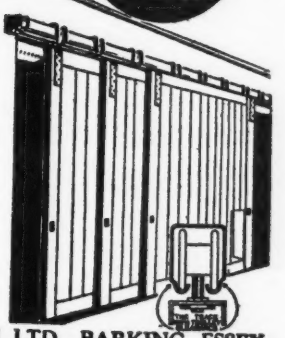
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Newcastle-upon-Tyne.—Houses, for the T.C. Housing Architect's Dept., 18, Cloth-market :—

Ferguson's-lane estate, sections "E" and "F," 170 houses :—	
Robt. G. Tarran, Hull	£54,239 5 0
A. V. Clerey & Sons, Sunderland	51,211 0 0
Alex. Anderson, Newcastle	51,065 0 0
Wm. D. Allison, Whitburn, nr. Sunderland	50,636 0 0
North-Eastern Estates Development Co., Ltd., Gosforth-park, Newcastle	50,328 0 0
H. Kindred, Whickham	50,121 19 5
*Gustavus Bailey, Ltd., 16, Kingstreet, South Shields	48,297 7 7
Ferguson's-lane estate, section "D," 40 bungalows—	
Gustavus Bailey, Ltd., South Shields	10,478 7 3
Robt. G. Tarran, Hull	9,622 0 0
A. V. Clerey & Sons, Sunderland	9,400 0 0
Wm. D. Allison, Whitburn, nr. Sunderland	9,156 0 0
H. Kindred, Whickham	9,110 5 5
*North-Eastern Estates Development Co., Ltd., Gosforth-park, Newcastle-on-Tyne	8,800 0 0
Daisy Hill estate, 102 houses—	
F. E. Maughan, Seaton Sluice	34,420 0 0
A. V. Clerey & Sons, Sunderland	30,974 0 0
L. W. Evans, Darlington	30,361 0 0
North-Eastern Estates Development Co., Ltd., Gosforth-park, Newcastle	30,246 0 0
H. Kindred, Whickham	29,726 9 9
M. J. Liddell & Son, Forest Hall	29,256 12 6
*Gustavus Bailey, Ltd., 16, Kingstreet, South Shields	29,148 0 0

Newton-le-Willows.—New institute. Mr. Pritchett, architect, Darlington :—

*T. & J. Willoughby, Northallerton.

Portsmouth.—Erection of Langstone Junior school, for the E.C. Mr. A. J. Sharp, L.R.I.B.A., architect. Quantities by Messrs. C. W. Bevis & Son, Elm Grove-chambers, Southsea :—

Tanner Bros. (Builders, Southsea), Ltd.	11,436
E. & A. Sprigings	11,385
S. Salter (Portsmouth), Ltd.	11,234
F. J. Privett, Ltd.	10,929
A. E. Porter & Son, Ltd.	11,086
J. A. Perriss, Acton	11,254
J. Lay & Co.	11,457
Howe & Bishop	11,854
G. J. Davis & Sons	11,674
‡Frank Bevis, Ltd.	10,799
(Remainder of Portsmouth.)	

Portsmouth.—18 flats in Sun-street, and 6 at Britain-street, Portsea, for the T.C. City Engineer :—

A. E. Porter & Son, Ltd., Portsmouth	£11,514
E. & A. Sprigings, Portsmouth	11,086
T. L. Norman & Son, Ltd., Southsea	10,056
†The Portsmouth, Gosport & District Builders' Guild, Ltd.	9,998

Portsmouth.—Extensions to casual wards at St. Mary's Institution, for the T.C. City Engineer :—

G. J. Davis & Sons	£4,600
John Lay & Co. (Portsmouth), Ltd.	4,133
Samuel Salter (Portsmouth), Ltd.	4,060
Frank J. Privett, Ltd.	3,945
†A. E. Porter & Son, Ltd.	3,941

Preston.—Extensions to County Offices, Fishergate, for Lancashire C.C. Mr. S. Wilkinson, F.R.I.B.A., County Architect :—

Builders—*T. Croft & Sons, Ltd., Preston.
Hollow block floors—*Caxton Floors, Ltd., London, S.W.1.

Sale.—Construction of swimming pool, for the Sale Lido, Ltd. Mr. A. E. Lancashire, architect, Albert-buildings, 14, Corporation-street, Preston :—

*J. Maunders & Son, Ltd., Stretford, Manchester.
(Estimated cost, £23,350.)

Scarborough.—24 bungalows and shelter on the North Bay Promenade, for the T.C. :—

*W. Birch & Sons, Spen-lane, York.

Shenley.—Store in the new orchard at the mental hospital, for the Middlesex C.C. :—

*C. Miskin & Sons, Ltd., St. Albans £215

South Mimms.—For (*a*) alterations to nurses' home and main hospital, and (*b*) remodelling of mortuary at Clare Hall Sanatorium, for the Middlesex C.C. :—

(*a*)—

Newby Bros., Ltd., Southgate	£1,078	0	0
J. Stewart & Sons, Ltd., Tottenham	931	0	0
C. Miskin & Sons, Ltd., St. Albans	897	0	0
J. Laing & Son, Ltd., Mill Hill	894	0	0
S. Worboys & Sons, Potters Bar	887	0	0
*H. E. Winskell, Barnet	798	6	4

(*b*)—

Newby Bros., Ltd., Southgate	1,145	0	0
J. Stewart & Sons, Ltd., Tottenham	1,063	0	0
H. E. Winskell, Barnet	1,051	4	9
S. Worboys & Sons, Potters Bar	1,047	0	0
J. Laing & Son, Ltd., Mill Hill	1,034	0	0
*C Miskin & Sons, Ltd., St. Albans	1,020	0	0

Southall.—60 houses on Allenby-road site, for the U.D.C. Engineer and Surveyor :—

Harris (Contractors), Ltd.	£25,050
Thomas Bros.	23,435
S. E. Moss & Sons	22,382
Burgess & Read	21,368
Philip Brown	20,575
Unit Construction Co., Ltd.	20,039
E. S. Moss, Ltd.	19,795
Alan Morris	18,864
J. Gerrard & Sons, Ltd.	18,490
†M. J. Gleeson, Ltd.	18,200

Tavistock.—4 houses at The Crescent, Lifton, for the R.D.C. Mr. T. H. Harris, surveyor :—

*Burley & Son, Ravytavy	£1,346

Twickenham.—For construction of sports pavilion and public conveniences at Moor Mead, for the T.C. :—

G. Hayward & Co.	£1,450	0	
Thomas Ailby, Ltd.	1,019	16	
John Harrison & Co.	963	0	
Boulton & Paul, Ltd.	882	0	
W. B. Potter	844	0	
Duncan Tucker (Tottenham), Ltd.	831	0	
Crosby & Co., Ltd.	785	0	
Super Builders, Ltd.	765	0	
William Harbrow, Ltd.	729	0	
Clissold Joinery, Ltd.	718	0	
G. E. Snell	715	0	
Thomas Bros.	705	10	
Greenaway & Son	685	0	
Wilson Bros.	678	0	
Lewisham Timber Co., Ltd.	676	0	
*Harrison Smith (Buildings), Ltd.	659	10	

Walsall.—55 non-parlour type houses on the Fullbrook site, for the T.C. :—

*L. G. Peace, Walsall	£14,410

Walthamstow.—20 houses and flats on land at Priors Croft, for the T.C.—

Burgess & Read	£6,541
Collett & Hull	6,042
*Borough Engineer and Surveyor	5,060
Haslam & Sons, Ltd.	4,940

Wednesbury.—148 houses at Crankhall-lane (West) and Dangerfield-lane sites, for the T.C. Mr. Arthur Booth, M.Inst.M.C.E., L.R.I.B.A., M.I.Struct.E., Borough Engineer and Surveyor :—

*A. M. Griffiths & Son, Ltd., Wolverhampton.

West Ham.—Reinstatement of the wall, etc., of the glazing factory, Marshgate-lane, the property of Messrs. Robinson King and British Challenge Glazing Co., Ltd., for the T.C. :—

Rowley Bros., Ltd.	£930	0	0
J. & R. Rooff, Ltd.	665	13	6
W. J. Cearns, Ltd.	716	0	0
A. E. Symes, Ltd.	635	3	2
H. C. Horswill, Ltd.	652	0	0
*W. & C. French, Ltd.	612	11	10

Wishaw.—Grocers' shops in Glasgow-road, for the Wishaw Co-operative Society, Ltd. The Scottish Wholesale Co-operative Society, Ltd., architects and measurers, 119, Paisley-road, Glasgow, C.5 :—

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Steel construction—*The Clyde Structural Iron Co., Ltd., Glasgow.
Joinery, carpentry and ironmongery—*Wishaw Co-operative Society, Ltd., Wishaw.
Plumber work and sanitary fittings—*J. McEwan & Sons, Wishaw.
Plaster—*W. Black, Wishaw.
Slater—*D. A. Horne, Wishaw.
Terrazzo work and floors, etc.—*Toffolo, Jackson & Co., Glasgow.
Painter and glazing—*Wishaw Co-operative Society, Ltd., Wishaw.
Granite and marble—*J. McCarren, Wishaw.

Wrexham.—Erection of new central school at Llay, for Denbighshire Education Authority. Mr. G. D. Wiles, County Architect, Acton Hall :—

W. Harbrow, Ltd., London, S.E.16	£14,085
Courtney & Co., Ltd., Belfast	12,980
J. Harrison & Co., Camberwell, S.E.5	12,813
T. Lowe & Sons, Ltd., Burton-on-Trent	11,976
Harrison Smith Buildings, Ltd., Birmingham	11,772
E. Taylor & Co., Ltd., Littleborough	11,549
Roberts & Sloss, Ltd., Liverpool	11,420
J. Gerrard & Sons, Ltd., Manchester	11,368
J. A. Milestone & Son, Ltd., Wallasey	11,250
J. Hughes, Ltd., near Wrexham	11,000
*A. Edwards, Ltd., Cefn-y-Bedd, Wrexham	10,987

Willesden.—Installation of hot water and heating at the new local offices in Willesden-lane, for the Middlesex C.C. :—

H. C. Goodman, Reading	£1,320
Dent & Hellyer, Ltd.	1,093
E. Deane & Beal, Ltd.	1,064
Fretwell Heating Company, Ltd.	1,049
William Freer, Ltd.	1,010
W. Richardson & Co., Ltd.	999
E. Dixon Barker & Co., West Hartlepool	950
The Brightside Foundry & Engineering Co., Ltd.	924
Heath & Co., Chiswick, W.4	873
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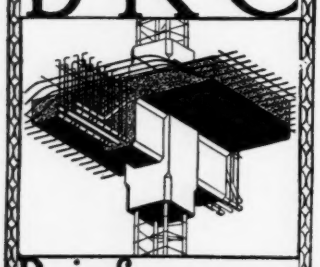
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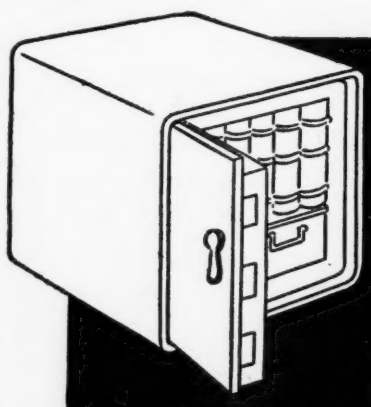
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